2021 Annual Groundwater Report Western Refining Southwest LLC Marathon Wingate Facility

Western Refining Southwest LLC
A subsidiary of Marathon Petroleum Corporation

September 15, 2021

Mr. Bradford Billings
EMNRD – Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

RE: 2021 Annual Groundwater Report
Western Refining Southwest LLC
Marathon Wingate Facility

Dear Mr. Billings:

Attached please find the 2021 Annual Groundwater Monitoring Report for the Western Refining Southwest LLC, Marathon Wingate Facility. If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at 505-879-7643.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction of supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Western Refining Southwest LLC, Gallup Refinery

Ruth A. Cade

Ruth Cade
Vice-President

Enclosure

cc: D. Cobrain, NMED HWB
G. McCartney, Marathon Petroleum Company
J. Moore, Marathon Wingate Facility
M. Suzuki, NMED HWB
K. Luka, Marathon Petroleum Company
H. Jones, Trihydro Corporation

WESTERN REFINING SOUTHWEST LLC

MARATHON WINGATE FACILITY

ANNUAL GROUNDWATER REPORT

SEPTEMBER 15, 2021

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1.0 Introduction

This "Annual Groundwater Report" (Report) summarizes the groundwater monitoring activities conducted at the Western Refining Southwest LLC, Marathon Wingate Facility (Facility) in Gallup, New Mexico (NM). The Report is submitted in accordance with the technical specifications of Abatement Plan No. 121 (AP-121), dated October 1, 2015, as approved by the NM Oil Conservation Division (OCD). This Report describes water quality monitoring activities completed during 2021. Groundwater sampling is performed on an annual basis. The data are used to monitor the groundwater quality at the Facility.

The Facility is located in McKinley County, NM, approximately one mile east of the city of Gallup, NM, at 68 El Paso Circle, Gallup, NM 87301 (Figure 1-1). The Facility is a former gas fractionator facility that operated until October 2018. Historically, the Facility fractionated a mixed liquefied petroleum-gas stream into usable products. Its feed stock was received via pipelines from four natural gas facilities. The products of the Facility at that time were propane, butane, isobutane, natural gas liquid (light gasoline) and mixed butane. Currently, the Facility is not in operation. Incoming product is received by railcar and stored at the Facility until transferred via pipeline to the Marathon Gallup Refinery, approximately 15 miles to the east.

One new monitoring well (WMW-9) was installed in April 2021 to support the benzene delineation investigation. WMW-9 was developed the week of July 12, 2021, prior to sampling. This monitoring well will continue to be monitored annually and included in subsequent annual groundwater monitoring reports. The boring log for WMW-9 is provided in Appendix A.

This Report summarizes the groundwater monitoring activities conducted at the Facility on July 21 and 22, and August 19, 2021. The following information is provided:

- Summary of monitoring and remediation activities that occurred during 2021
- New monitoring well log and details
- Summary table of analytical results
- Fluid level and potentiometric surface maps

2.0 Fluid Level Gauging

Trihydro Corporation (Trihydro) collected fluid levels from nine monitoring wells at the Facility on July 21 and 22, and August 19, 2021. There are six wells located onsite and three wells offsite (Figure 2-1). Field logs for the 2021 monitoring event are included in Appendix B.

An oil-water surface interface probe was used to measure groundwater and separate phase hydrocarbon (SPH) depths, if detected. SPH was not detected in the Facility's monitoring wells during the 2021 sampling event. The interface probe was decontaminated after use at each monitoring well location.

Groundwater elevations were calculated from the depth to groundwater measurements and are presented in Table 2-1. The measuring point elevation of WMW-9 was estimated using nearby monitoring well WMW-7. WMW-9 will be surveyed and a revised measuring point elevation will be included in future reports.

Groundwater depths were consistent with previous measurements. The groundwater elevations were used to develop the potentiometric surface map (Figure 2-2). Groundwater elevation versus time is presented on Figure 2-3. Groundwater generally flows towards the northwest and is consistent with previous monitoring events.

During the July 2020 fluid level gauging event, the groundwater elevation in monitoring well WMW-6 was measured approximately 10 feet higher than typical, most likely due to heavy monsoon rains. However, during the 2021 fluid level gauging event, the groundwater elevation in WMW-6 had returned to its historical level (Figure 2-3).

WMW-3 was proposed to be plugged and abandoned in 2020; however, due to delays caused by the COVID-19 pandemic, this abandonment has not occurred. Current plans are to replace WMW-3 before the next annual groundwater sampling event scheduled in 2022.

3.0 Groundwater Sampling

Groundwater samples were collected on July 21 and 22, 2021, from eight of the nine monitoring wells. Monitoring well WMW-6 was sampled on August 19, 2021. As required by AP-121, OCD was notified two weeks prior to the sampling.

Samples were collected using a low-flow peristaltic pump with disposable tubing, that was replaced between monitoring wells. Field parameters were collected a minimum of every three minutes while groundwater from each well was extracted. The groundwater was extracted until the field parameters stabilized. Field parameters included temperature, pH, conductivity, oxidation reduction potential, and dissolved oxygen. Following stabilization, the groundwater was collected in laboratory-prepared sample containers. Samples collected were analyzed for the following constituents:

- Volatile Organic Compounds (VOC) – Method 8260
- Semi-Volatile Organic Compounds (SVOC) – Method 8270
- Dissolved Metals – Method 6010
- Mercury – Method 7470
- Alkalinity, Total as CaCO3 – Method SM2320B
- Total Dissolved Solids – Method SM2540C
- pH – Method 9040
- Chloride, Nitrogen, Nitrate, and Sulfate – Method 300.0
- Total Uranium – Method 200.8

Quality assurance/quality control (QA/QC) samples (i.e., field duplicates, equipment blanks, and trip blanks) were collected and submitted under chain-of-custody controls for laboratory analysis. Duplicate groundwater samples were collected at monitoring wells WMW-5 and WMW-7. An equipment blank was also collected for each day of groundwater sampling. The duplicate samples and equipment blanks were analyzed for the same constituents as the monitoring wells. A trip blank was provided by the laboratory for each cooler and trip blanks were kept in the coolers during the entirety of sampling. The trip blanks were analyzed for VOCs.

4.0 Analytical Results

The groundwater samples were analyzed by Hall Environmental Laboratory of Albuquerque, NM. Analytical laboratory reports are provided in Appendix C.

The 2021 groundwater analytical results for VOCs, SVOCs, metals, and general chemistry analytes are provided in Tables 4-1, 4-2, 4-3, and4-4, respectively. The commonly-noted constituents of concern that have historically exceeded regulatory standards are shown on Figure 4-1. Sulfate concentrations versus time for the monitoring wells are shown on Figure 4-2. Total dissolved solids concentrations versus time for the monitoring wells are shown on Figure 4-3. Benzene concentrations versus time for monitoring wells WMW-2 and WMW-9 are shown on Figure 4-4, and total xylenes concentrations versus time in monitoring well WMW-2 is shown on Figure 4-5.

Analytical results were compared to the New Mexico Water Quality Control Commission (WQCC) groundwater quality standards, found in New Mexico Administrative Code 20.6.2.3103. Analytical results that exceeded their respective standards are shown in bold text in Tables 4-1 through Table 4-4.

The concentration of benzene in monitoring well WMW-2 (27 milligrams per liter [mg/L]) continues to exceed the groundwater quality standard (0.01 mg/L). The initial groundwater sample from new monitoring well WMW-9 also exceeded the groundwater standard of benzene (21 mg/L). Multiple investigations have taken place to delineate dissolved phase benzene near WMW-2, including the installation of WMW-9. A summary of these investigation results will be submitted to OCD during the fourth quarter of 2021. WMW-9 will be included in the annual groundwater monitoring program moving forward.

No other VOC detections exceeded the WQCC groundwater quality standards. There were no SVOC detections exceeding the WQCC groundwater quality standards during 2021. Two metals exceeded their respective standards during 2021, dissolved arsenic exceeded in monitoring wells WMW-1R and WMW-9 and total uranium exceeded in WMW-1R and WMW-7. Chloride, total dissolved solids, and sulfate have historically exceeded the standards across the Facility and continued to do so during 2021. These exceedances are generally consistent with historical monitoring.

The analytical data underwent Tier I and Tier II data validation. Data qualifiers are included in Tables 4-1 through 4-4, if applicable. The Tier II data validation reports are provided in Appendix D.

5.0 Summary

Groundwater monitoring activities at the Facility occurred on July 21-22, and August 19, 2021. Activities included fluid level gauging and groundwater sampling. Analytical results were compared against WQCC groundwater standards and exceedances were noted in Section 4.0.

Groundwater exceedances across the site are generally consistent with historical results. Benzene continues to exceed in the southwest portion of the site, including the new monitoring well WMW-9.

Trihydro has completed several investigations to delineate the dissolved phase benzene at the Facility. A fourth phase of the investigation is planned for fourth quarter 2021. Following the delineation of benzene, a report summarizing the investigation activities will be submitted to OCD. This report will include potential remediation options to remove benzene from the groundwater.

WMW-3 is scheduled to be plugged, abandoned, and replaced before the next annual sampling event occurs in July 2022. The Facility will notify OCD for approval prior to installation of the replacement well.

Figures

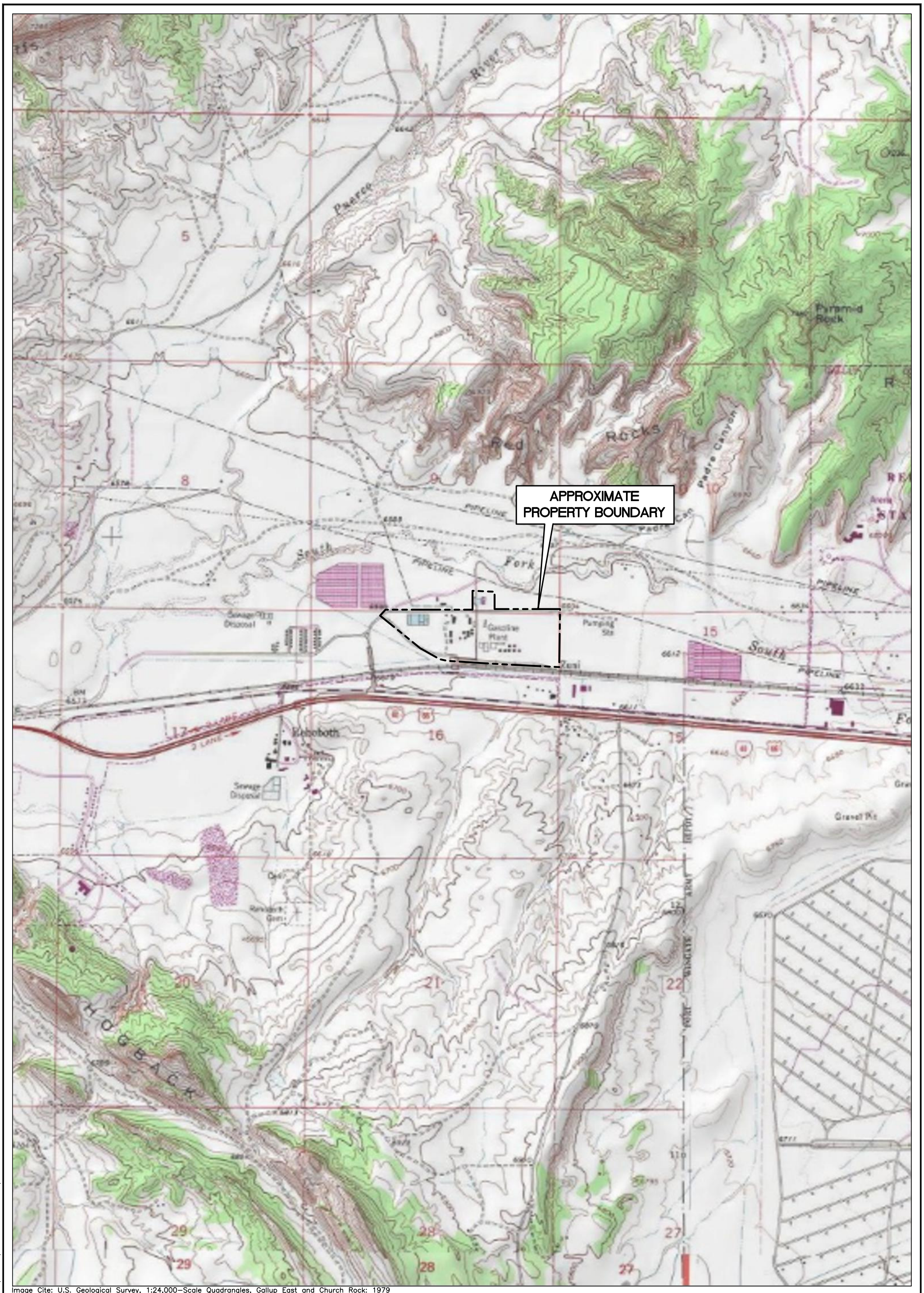


Image Cite: U.S. Geological Survey, 1:24,000–Scale Quadrangles, Gallup East and Church Rock: 1979

QUADRANGLE LOCATION

EXPLANATION

NM NEW MEXICO

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1-1

SITE LOCATION MAP

WESTERN REFINING SOUTHWEST LLC
MARATHON WINGATE FACILITY, GALLUP, NM

Drawn By: SB	Checked By: CF	Scale: 1" = 2,000'	Date: 8/19/2021	File: 697-WIN_SITELOCATIONMAP

\\TRIHYDRO.COM\CLIENTS\ITON\MARATHON\CADD\WINGATE_COREFILES–BASEMAPS\697–WIN_SITELOCATIONMAP

\\TRIHYDRO.COM\CLIENTS\TON MARATHON\CADD\WINGATE_COREFILES-BASEMAPS\697-WIN_SITEPLAN

EXPLANATION

WMW-7 — MONITORING WELL AND DESIGNATION

APPROXIMATE PROPERTY BOUNDARY

NM — NEW MEXICO

N

0 300'

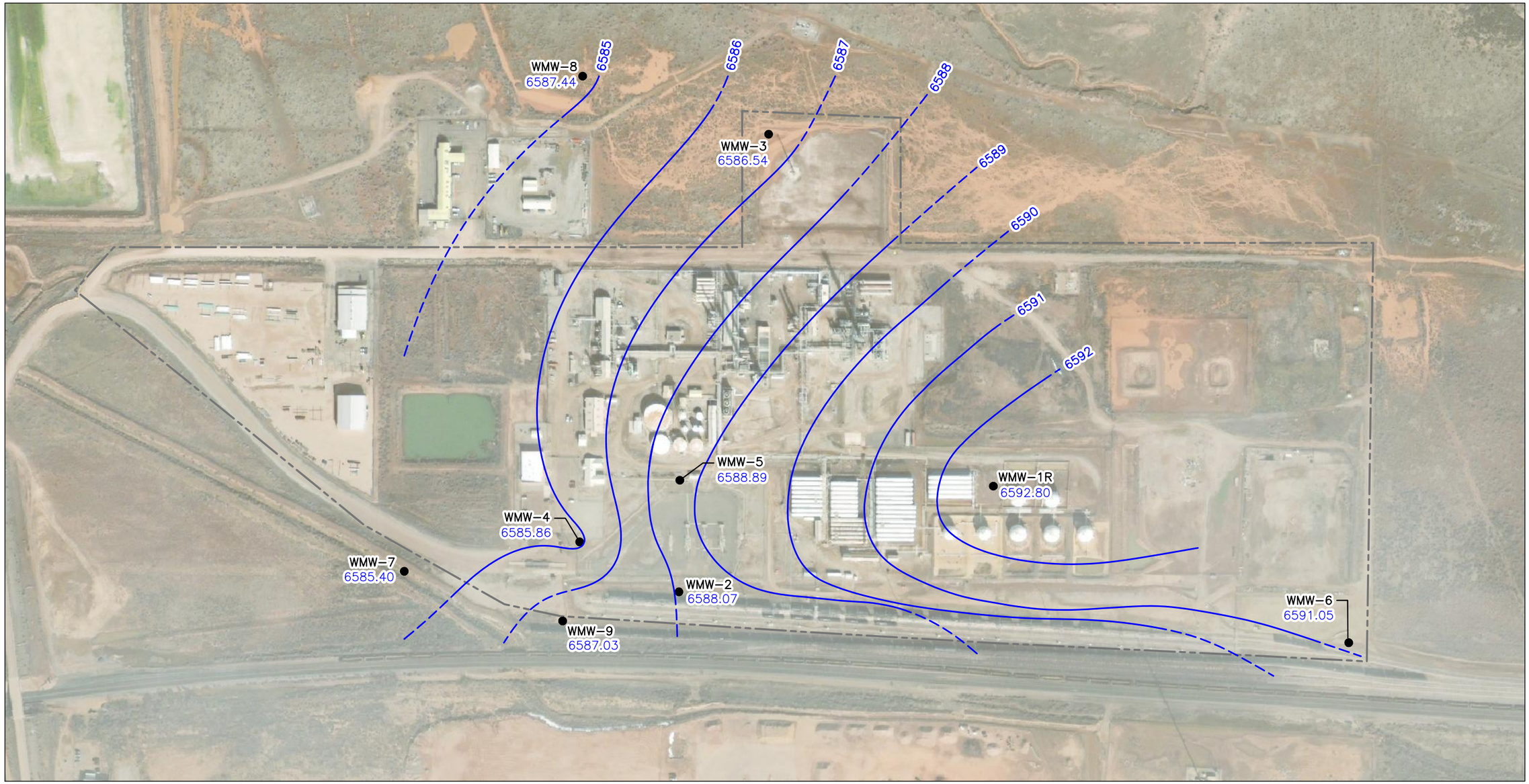
Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 2-1

SITE MAP

WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC
MARATHON WINGATE FACILITY, GALLUP, NM

Drawn By: SB	Checked By: CF	Scale: 1" = 300'	Date: 8/19/21	File: 697-WIN_SITEPLAN



EXPLANATION

WMW–7 6585.40	MONITORING WELL AND DESIGNATION SHOWING GROUNDWATER ELEVATION IN FT AMSL
6585	LINE OF EQUAL ELEVATION OF POTENTIOMETRIC SURFACE (FT AMSL, CONTOUR INTERVAL 1 FT., DASHED WHERE INFERRED)
	APPROXIMATE PROPERTY BOUNDARY
FT AMSL	FEET ABOVE MEAN SEA LEVEL
NM	NEW MEXICO

NOTE:

WMW-9 MEASURING POINT ELEVATION ESTIMATED USING NEARBY WMW-7 MEASURING POINT ELEVATION

N

0 300'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 2-2

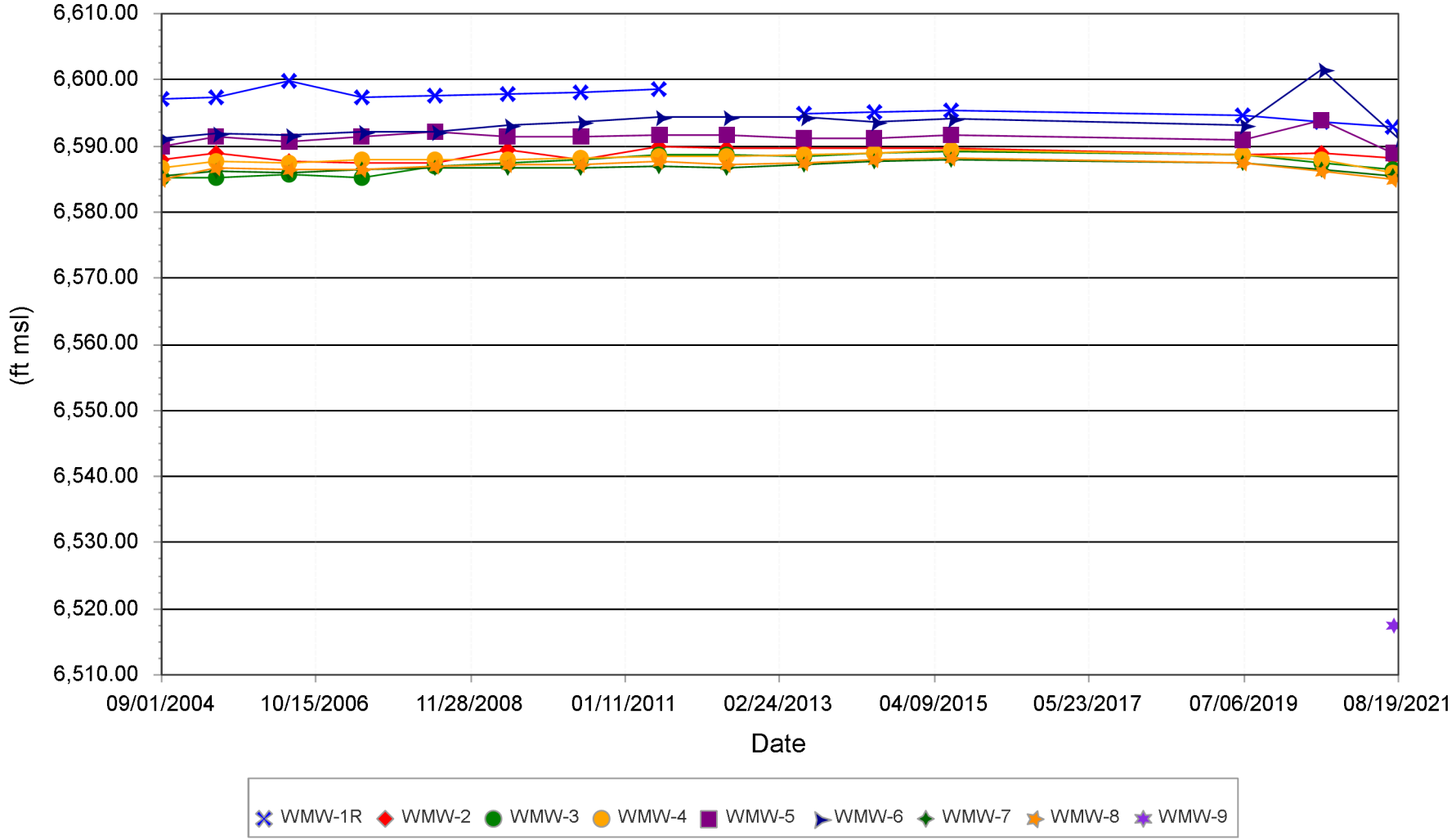
POTENTIOMETRIC SURFACE MAP

WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST, LLC
MARATHON WINGATE FACILITY, GALLUP, NM

Drawn By: SB	Checked By: CF	Scale: 1" = 300'	Date: 8/27/21	File: 697-WIN_PSMAP-2021

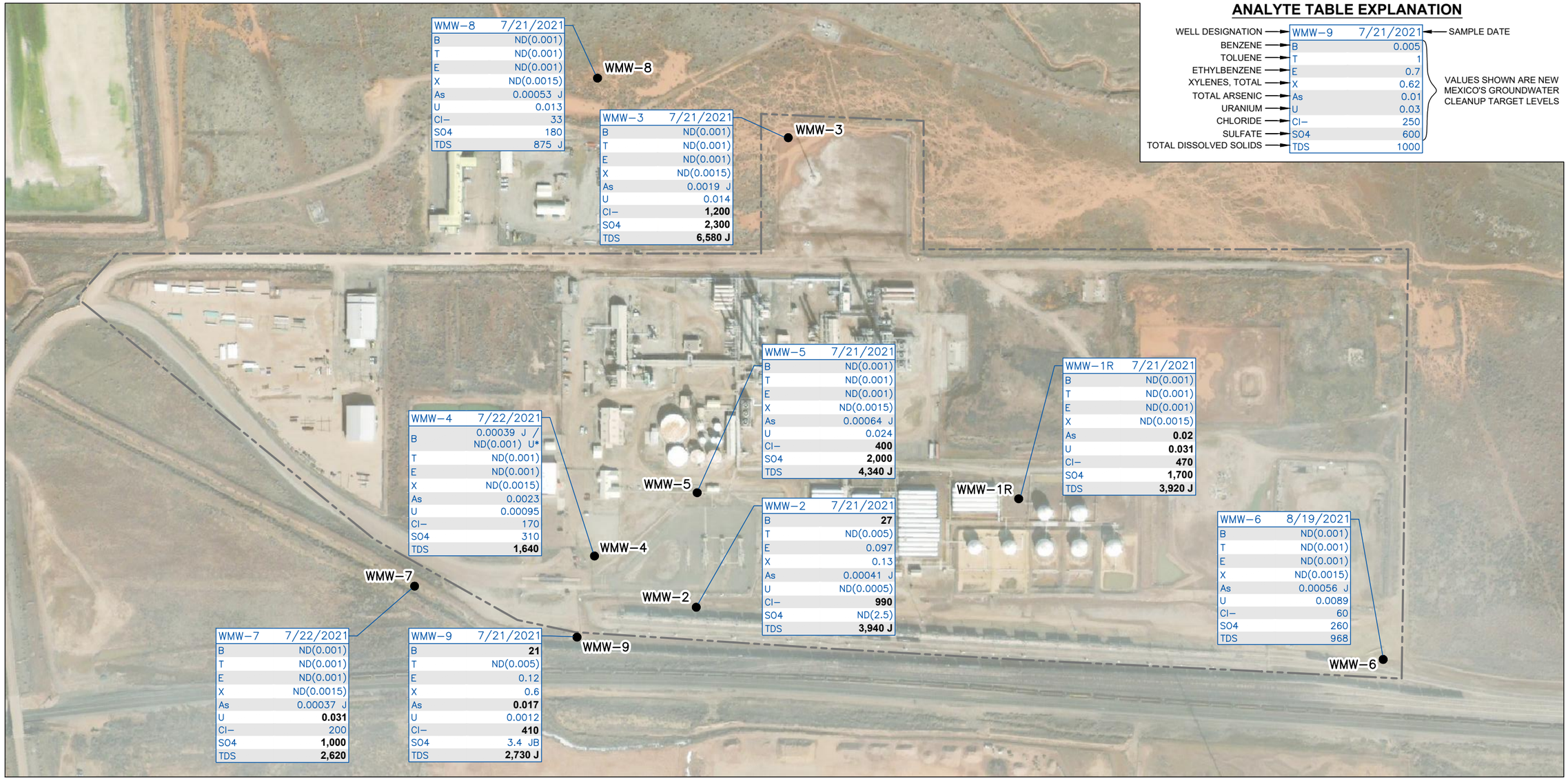
\\TRIHYDRO.COM\CLIENTS\VTON\MARATHON\CADD\WINGATE\GROUNDWATER\REPORTING\REPORT2021\697-WIN_PSMAP-2021

FIGURE 2-3. GROUNDWTER ELEVATION VS. TIME
WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO



Notes: ft msl - Feet below mean sea level

ProjectDirect: GW Elevations PK:8111 RK:97266



WMW-8	7/21/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.00053 J
U	0.013
Cl–	33
SO4	180
TDS	875 J

WMW-3	7/21/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.0019 J
U	0.014
Cl–	**1,200**
SO4	**2,300**
TDS	**6,580 J**

WMW-4	7/22/2021
B	0.00039 J / ND(0.001) U*
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.0023
U	0.00095
Cl–	170
SO4	310
TDS	**1,640**

WMW-5	7/21/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.00064 J
U	0.024
Cl–	**400**
SO4	**2,000**
TDS	**4,340 J**

WMW-2	7/21/2021
B	**27**
T	ND(0.005)
E	0.097
X	0.13
As	0.00041 J
U	ND(0.0005)
Cl–	**990**
SO4	ND(2.5)
TDS	**3,940 J**

WMW-1R	7/21/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	**0.02**
U	**0.031**
Cl–	**470**
SO4	**1,700**
TDS	**3,920 J**

WMW-6	8/19/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.00056 J
U	0.0089
Cl–	60
SO4	260
TDS	968

WMW-7	7/22/2021
B	ND(0.001)
T	ND(0.001)
E	ND(0.001)
X	ND(0.0015)
As	0.00037 J
U	**0.031**
Cl–	200
SO4	**1,000**
TDS	**2,620**

WMW-9	7/21/2021
B	**21**
T	ND(0.005)
E	0.12
X	0.6
As	**0.017**
U	0.0012
Cl–	**410**
SO4	3.4 JB
TDS	**2,730 J**

ANALYTE TABLE EXPLANATION

	WMW-9	7/21/2021	
WELL DESIGNATION →			← SAMPLE DATE
BENZENE →	B	0.005	
TOLUENE →	T	1	
ETHYLBENZENE →	E	0.7	
XYLENES, TOTAL →	X	0.62	VALUES SHOWN ARE NEW MEXICO'S GROUNDWATER CLEANUP TARGET LEVELS
TOTAL ARSENIC →	As	0.01	
URANIUM →	U	0.03	
CHLORIDE →	Cl–	250	
SULFATE →	SO4	600	
TOTAL DISSOLVED SOLIDS →	TDS	1000	

EXPLANATION

WMW-7	MONITORING WELL AND DESIGNATION
	APPROXIMATE PROPERTY BOUNDARY
ND	NOT DETECTED
NM	NEW MEXICO

NOTES:

1. SITE FEATURES ARE APPROXIMATE.
2. ALL VALUES ARE IN MILLIGRAMS PER LITER (mg/L).
3. VALUES SHOWN IN **BOLD FONT AND BLACK COLOR** EXCEED NEW MEXICO'S GROUNDWATER CLEANUP TARGET LEVELS.
4. SAMPLE DATES ARE ALL FORMATTED AS MONTH/DAY/YEAR.
5. J = ESTIMATED CONCENTRATION
6. JB = ESTIMATED CONCENTRATION DUE TO BLANK CONTAMINATION
7. U = EVALUATED TO BE UNDETECTED AT THE REPORTED CONCENTRATION
8. * = THE FIRST RESULT REPRESENTS THE LABORATORY REPORTED CONCENTRATION. THE SECOND RESULT WAS EVALUATED TO BE UNDETECTED AT THE REPORTED CONCENTRATION BY THE DATA VALIDATOR. THE RESULT WAS DETERMINED TO BE A FALSE POSITIVE

N

0 300'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 4-1

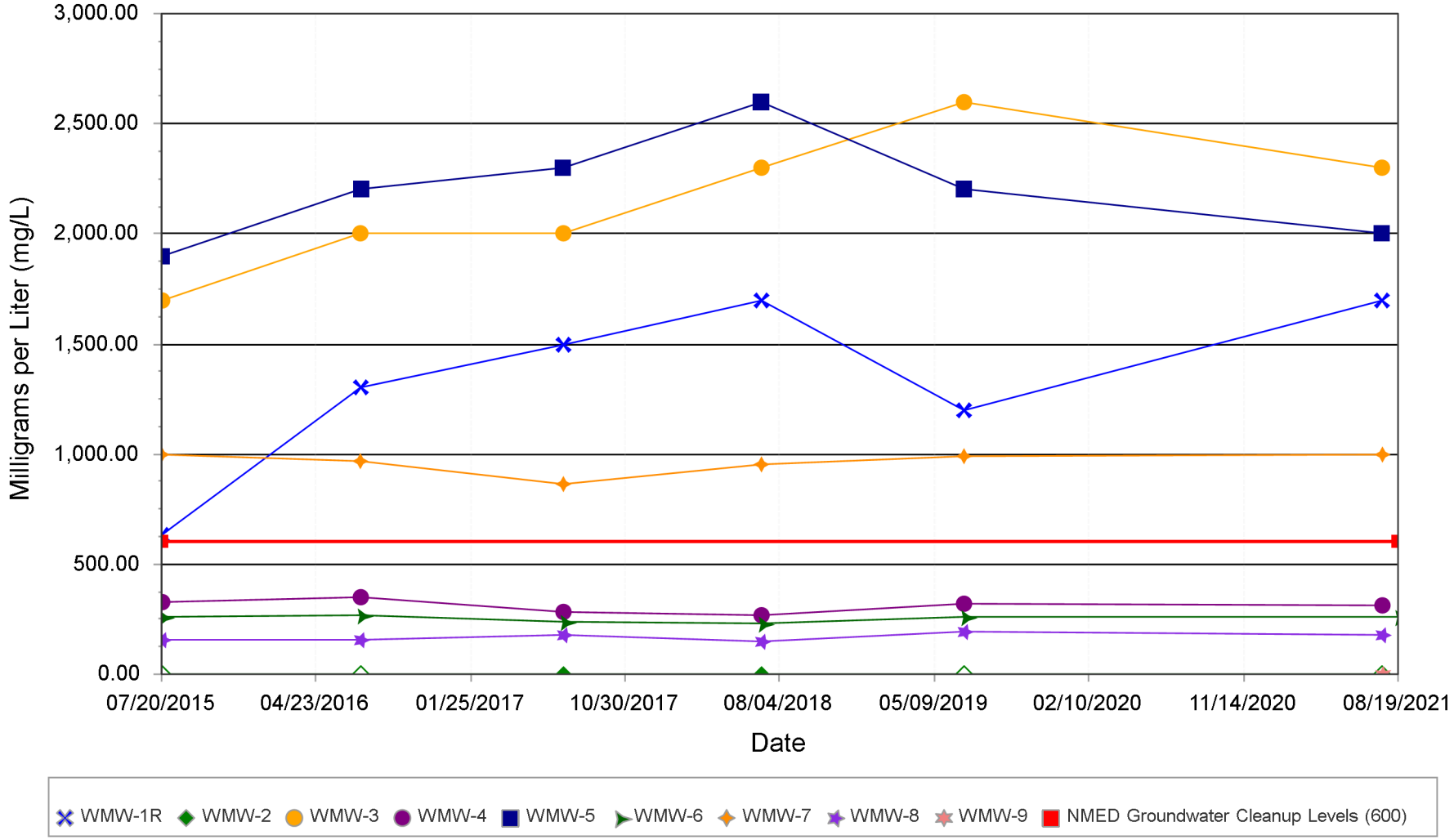
GROUNDWATER ANALYTICAL SUMMARY

WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC
MARATHON WINGATE FACILITY, GALLUP, NM

Drawn By: SB	Checked By: CF	Scale: 1" = 300'	Date: 9/1/21	File: 697-WIN_ANALYTICAL-2021

\\TRIHYDRO.COM\CLIENTS\TON\MARATHON\CADD\WINGATE\GROUNDWATER_REPORTING\REPORT2021\697-WIN_ANALYTICAL-2021

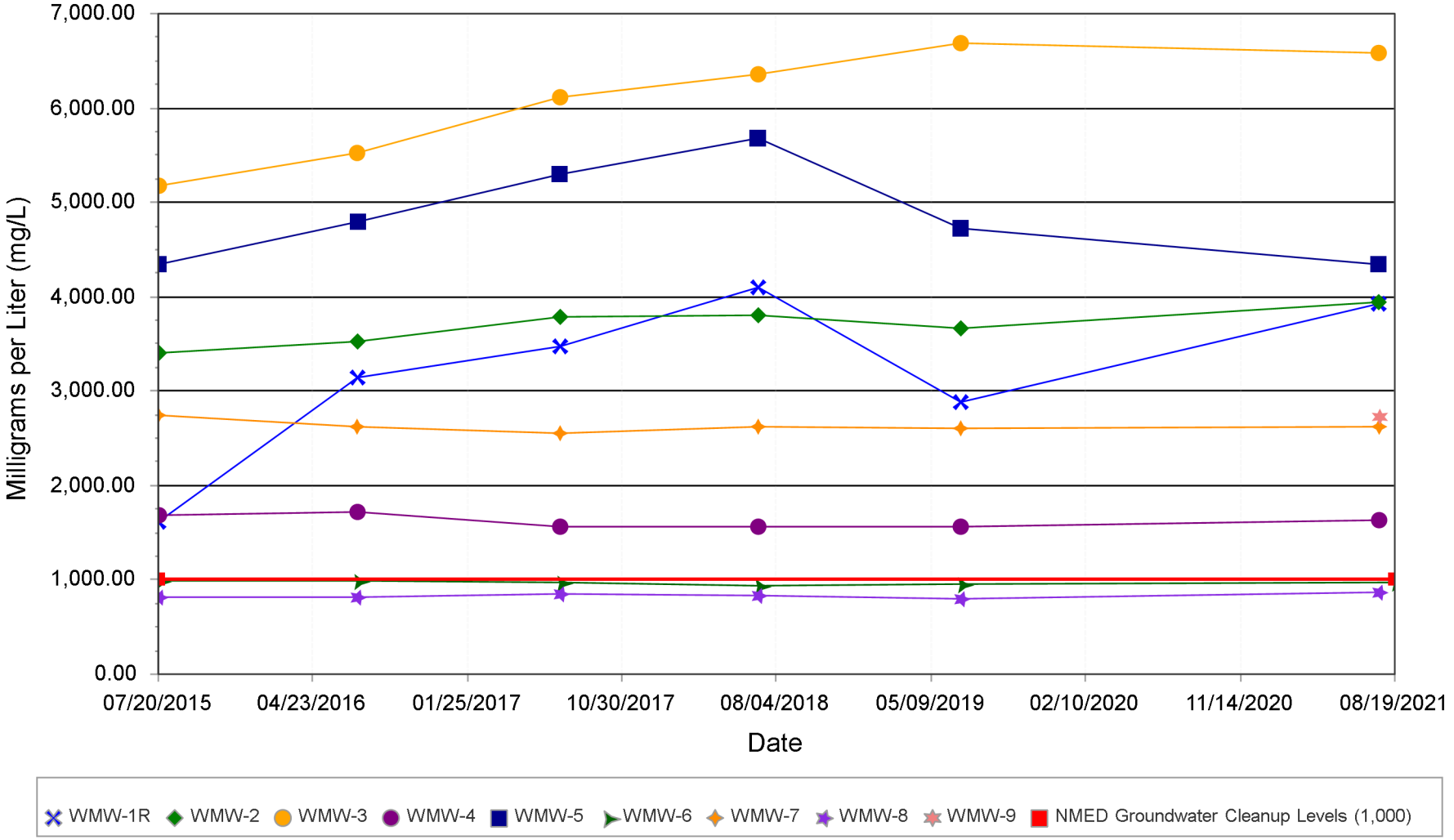
FIGURE 4-2. SULFATE CONCENTRATION VS. TIME
WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO



Notes: NMED Groundwater Cleanup Levels - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103

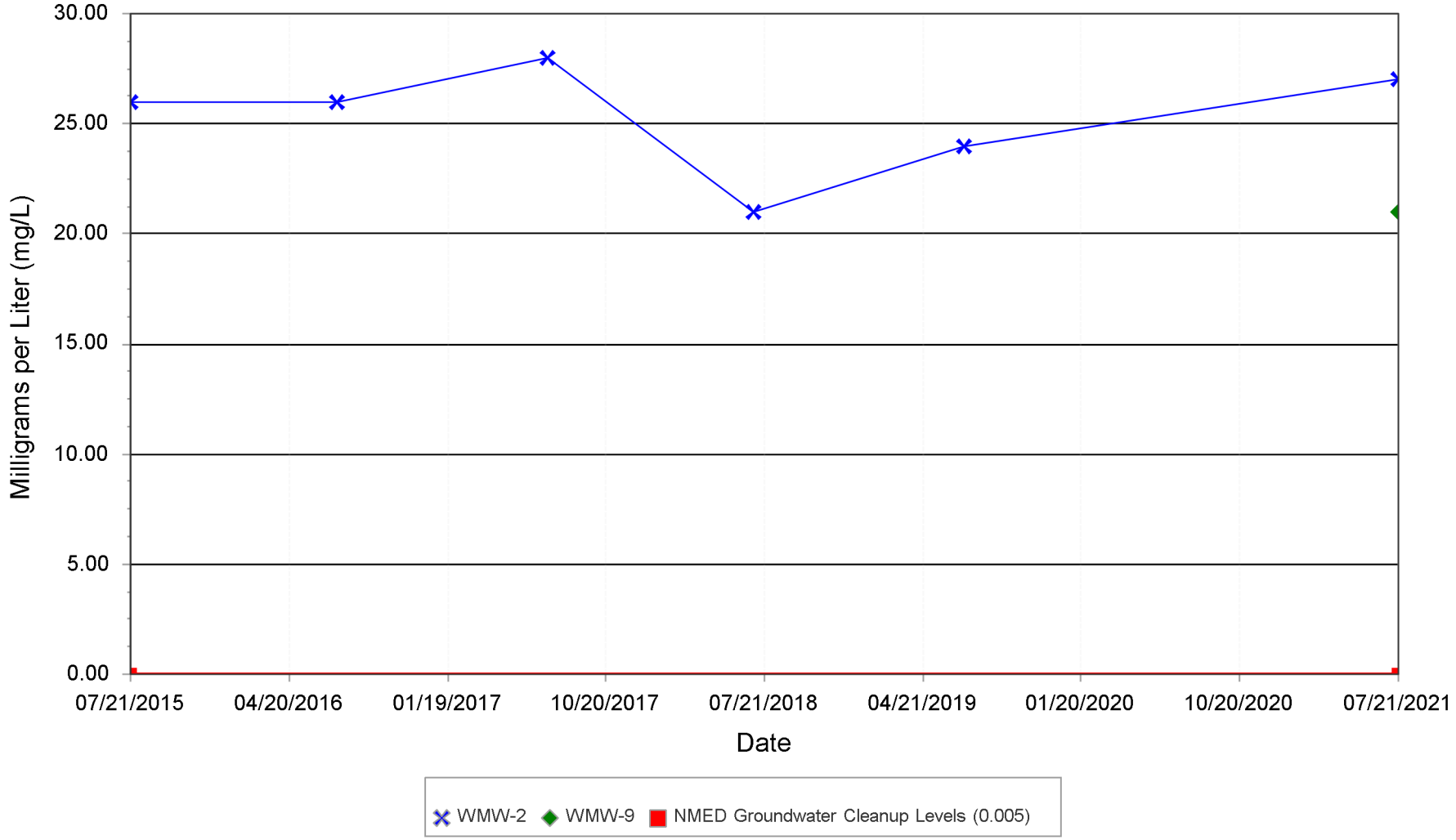
ProjectDirect: SULFATE PK:8111 RK:97439

FIGURE 4-3. TOTAL DISSOLVED SOLIDS CONCENTRATIONS VS. TIME
WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NM



ProjectDirect: TDS PK:8111 RK:97440

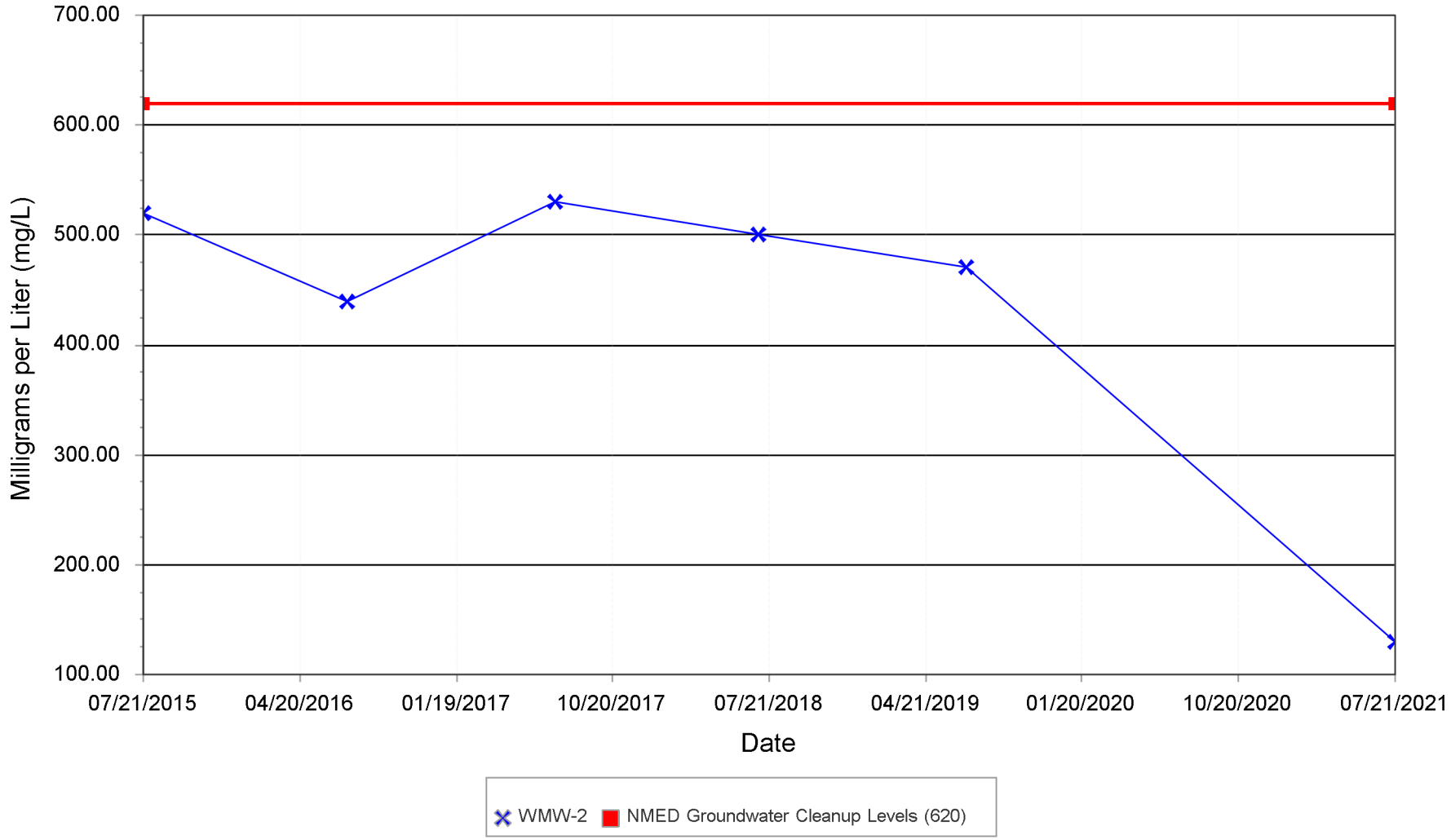
FIGURE 4-4. BENZENE CONCENTRATIONS OF WMW-2 AND WMW-9 VS. TIME
WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NM



Notes: NMED Groundwater Cleanup Levels - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103

ProjectDirect: Benzene PK:8111 RK:97441

FIGURE 4-5. TOTAL XYLENES CONCENTRATION OF WMW-2 VS. TIME
WINGATE 2021 GROUNDWATER REPORT
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NM



Notes: NMED Groundwater Cleanup Levels - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103

ProjectDirect: Total Xylenes PK:8111 RK:97442

Tables

TABLE 2-1. FLUID LEVEL MONITORING (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location	Date Measured	Depth to Product (ft-bmp)	Depth to Water (ft-bmp)	Water Elevation (ft-msl)
WMW-1R	7/21/2021	ND	10.97	6592.80
WMW-2	7/21/2021	ND	6.81	6588.07
WMW-3	7/21/2021	ND	8.38	6586.54
WMW-4	7/22/2021	ND	9.63	6585.86
WMW-5	7/21/2021	ND	8.22	6588.89
WMW-6	8/19/2021	ND	12.81	6591.05
WMW-7	7/22/2021	ND	9.30	6585.40
WMW-8	7/21/2021	ND	9.18	6584.87
WMW-9	7/21/2021	ND	6.97	6587.03

Notes:
ft-bmp = feet below measuring point
ft-msl = feet mean sea level
ND = Not detected
The measuring point elevation of WMW-9 was estimated using WMW-7. Water elevation is an estimated value.

TABLE 4-1. GROUNDWATER VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Benzene (mg/L)	Ethyl- benzene (mg/L)	Toluene (mg/L)	Xylenes, Total (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	2-Butanone (mg/L)	Chloromethane (mg/L)	1,2- Dichloro- ethane (mg/L)
WMW-1R	07/21/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0046J/ND(0.01)U*	0.0022J/ND(0.01)U*	ND(0.003)	ND(0.001)
WMW-2	07/21/21	**27**	0.097	ND(0.005)	0.13	0.024	0.02J/ND(0.05)U*	ND(0.05)	0.011 J	0.0013 J
WMW-3	07/21/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	ND(0.01)	ND(0.01)	ND(0.003)	ND(0.001)
WMW-4	07/22/21	0.00039J/ND(0.001)U*	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0039J/ND(0.01)U*	ND(0.01)	0.001 J	0.00037 J
WMW-5	07/21/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0038J/ND(0.01)U*	ND(0.01)	ND(0.003)	ND(0.001)
WMW-5 Dup	07/21/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	ND(0.01)	ND(0.01)	ND(0.003)	ND(0.001)
WMW-6	08/19/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	ND(0.01)	ND(0.01)	ND(0.003)	ND(0.001)
WMW-7	07/22/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0037J/ND(0.01)U*	ND(0.01)	ND(0.003)	ND(0.001)
WMW-7 Dup	07/22/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0066 J	ND(0.01)	ND(0.003)	ND(0.001)
WMW-8	07/21/21	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0015)	ND(0.002)	0.0037J/ND(0.01)U*	ND(0.01)	ND(0.003)	ND(0.001)
WMW-9	07/21/21	**21**	0.12	ND(0.005)	0.6	0.015	0.016J/ND(0.05)U*	ND(0.05)	ND(0.015)	0.0015 J
NMED GW Cleanup Level		0.005	0.7	1	0.62	0.03	NA	NA	NA	0.005

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
VOC - volatile organic compounds
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration
U - Evaluated to be undetected at the reported concent
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.

TABLE 4-1. GROUNDWATER VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Isopropyl- benzene (mg/L)	4-Methyl- 2-Pentanone (mg/L)	1-Methyl- naphthalene (mg/L)	2-Methyl- naphthalene (mg/L)	n-Propyl- benzene (mg/L)	1,2,4- Trimethyl- benzene (mg/L)	1,3,5-Trimethyl- benzene (mg/L)	All Other VOCs
WMW-1R	07/21/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-2	07/21/21	0.0046 J	0.021 J	0.009 J	0.015 J	0.0032 J	0.033	ND(0.005)	ND
WMW-3	07/21/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-4	07/22/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-5	07/21/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-5 Dup	07/21/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-6	08/19/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-7	07/22/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-7 Dup	07/22/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-8	07/21/21	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-9	07/21/21	0.0049 J	ND(0.05)	0.0044 J	0.0057 J	0.0037 J	0.017	0.0074	ND
NMED GW Cleanup Level		NA	NA	NA	NA	NA	NA	NA	NA

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
VOC - volatile organic compounds
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration
U - Evaluated to be undetected at the reported concent
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.

TABLE 4-2. GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Acenaph- thene (mg/L)	Benzyl Alcohol (mg/L)	Bis(2-ethyl hexyl)- phthalate (mg/L)	Car- bazole (mg/L)	Dibenzo- furan (mg/L)	Di-n- octyl- phthalate (mg/L)	Fluor- anthene (mg/L)	Fluorene (mg/L)	Phen- anthrene (mg/L)
WMW-1R	07/21/21	ND(0.005)	ND(0.005)	0.0049J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	ND(0.005)	ND(0.005)
WMW-2	07/21/21	0.0016 J	ND(0.005)	0.005J/ND(0.01)U*	0.0041 J	0.0026 J	ND(0.02)	0.0047 J	0.0034 J	0.0041 J
WMW-3	07/21/21	ND(0.005)	0.0015 J	0.0047J/ND(0.01)U*	ND(0.005)	ND(0.005)	0.0068 J	ND(0.01)	ND(0.005)	ND(0.005)
WMW-4	07/22/21	ND(0.005)	ND(0.005)	0.0055J/ND(0.01)U*	ND(0.005)	ND(0.005)	0.0067 J	ND(0.01)	ND(0.005)	ND(0.005)
WMW-5	07/21/21	ND(0.005)	ND(0.005)	ND(0.01)	ND(0.005)	ND(0.005)	0.0066 J	ND(0.01)	ND(0.005)	ND(0.005)
WMW-5 Dup	07/21/21	ND(0.005)	ND(0.005)	0.0046J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	ND(0.005)	ND(0.005)
WMW-6	08/19/21	ND(0.005)	ND(0.005)	0.006J/ND(0.01)U*	ND(0.005)	ND(0.005)	0.0051 J	ND(0.01)	ND(0.005)	ND(0.005)
WMW-7	07/22/21	ND(0.005)	ND(0.005)	0.0052J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	ND(0.005)	ND(0.005)
WMW-7 Dup	07/22/21	ND(0.005)	ND(0.005)	0.0045J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	ND(0.005)	ND(0.005)
WMW-8	07/21/21	ND(0.005)	ND(0.005)	0.0051J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	ND(0.005)	ND(0.005)
WMW-9	07/21/21	ND(0.005)	ND(0.005)	0.0049J/ND(0.01)U*	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.01)	0.0034 J	0.0039 J
NMED GW Cleanup Level		NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
SVOC - semi-volatile organic compounds
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration
UJ - Estimated reporting limit
U - Evaluated to be undetected at the reported concent
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.

TABLE 4-2. GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Phenol (mg/L)	Naphthalene (mg/L)	1-Methyl- naphthalene (mg/L)	2-Methyl- naphthalene (mg/L)	All Other SVOCs
WMW-1R	07/21/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-2	07/21/21	0.02	0.0096	0.0035 J	0.005 J	ND
WMW-3	07/21/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-4	07/22/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-5	07/21/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-5 Dup	07/21/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-6	08/19/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-7	07/22/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-7 Dup	07/22/21	ND(0.005) UJ	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-8	07/21/21	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-9	07/21/21	0.076	0.005	0.0024 J	0.0019 J	ND
NMED GW Cleanup Level	NA	0.03	NA	NA	NA	

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
SVOC - semi-volatile organic compounds
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration
UJ - Estimated reporting limit
U - Evaluated to be undetected at the reported concent
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.

TABLE 4-3. GROUNDWATER METALS ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Arsenic, Dissolved (mg/L)	Barium, Dissolved (mg/L)	Cadmium, Dissolved (mg/L)	Calcium, Dissolved (mg/L)	Chromium, Dissolved (mg/L)	Lead, Dissolved (mg/L)	Mercury, Total (mg/L)	Selenium, Dissolved (mg/L)	Silver, Dissolved (mg/L)	Sodium, Dissolved (mg/L)	Uranium, Total (mg/L)
WMW-1R	07/21/21	**0.02**	0.06	ND(0.002)	290	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.005)	0.0016 J	1000	**0.031**
WMW-2	07/21/21	0.00041 J	0.66	ND(0.002)	44	ND(0.006)	ND(0.0005)	ND(0.0002)	0.0013	ND(0.005)	1600	ND(0.0005)
WMW-3	07/21/21	0.0019 J	0.038	ND(0.002)	160	0.002 J	0.0038	ND(0.0004)	0.0026 J	ND(0.005)	2000	0.014
WMW-4	07/22/21	0.0023	0.053	ND(0.002)	20	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.001)	ND(0.005)	560	0.00095
WMW-5	07/21/21	0.00064 J	0.0073	ND(0.002)	190	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.005)	ND(0.005)	1200	0.024
WMW-5 Dup	07/21/21	0.00086 J	0.0076	ND(0.002)	190	ND(0.006)	ND(0.0025)	ND(0.0002)	ND(0.005)	ND(0.005)	1300	0.024
WMW-6	08/19/21	0.00056 J	0.031	ND(0.002)	34	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.001)	ND(0.005)	310	0.0089
WMW-7	07/22/21	0.00037 J	0.027	ND(0.002)	37	ND(0.006)	0.000058 J	ND(0.0002)	ND(0.001)	ND(0.005)	900	**0.031**
WMW-7 Dup	07/22/21	ND(0.005)	0.029	ND(0.002)	37	ND(0.006)	0.000072 J	ND(0.0002)	ND(0.005)	ND(0.005)	880	**0.031**
WMW-8	07/21/21	0.00053 J	0.14	ND(0.002)	34	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.001)	ND(0.005)	280	0.013
WMW-9	07/21/21	**0.017**	0.61	ND(0.002)	15	ND(0.006)	ND(0.0005)	ND(0.0002)	ND(0.001)	ND(0.005)	950	0.0012
NMED GW Cleanup Level		0.01	2	0.005	NA	0.05	0.015	0.002	0.05	0.05	NA	0.03

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration

ProjectDirect: Analytical Table 4-3. Metals PK:8111 RK:97419

TABLE 4-4. GROUNDWATER GENERAL CHEMISTRY ANALYTICAL DATA (2021)
WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Alkalinity (mg/L CaCO3)	Bicarbonate as CaCO3 (mg/L CaCO3)	Carbonate (mg/L CaCO3)	Chloride (mg/L)	Nitrate & Nitrite (mg/L)	Nitrogen, Nitrate (mg/L)	Nitrogen, Nitrite (mg/L)	pH (Std Units)	Total Dissolved Solids (mg/L)	Sulfate (mg/L)
WMW-1R	07/21/21	810.9	810.9	ND(2)	**470**	ND(1)	--	--	7.68 J	**3920 J**	**1700**
WMW-2	07/21/21	2176	2070	106.4	**990**	1 JB	--	--	8.06 J	**3940 J**	ND(2.5)
WMW-3	07/21/21	1082	1082	ND(2)	**1200**	ND(1)	--	--	8.07 J	**6580 J**	**2300**
WMW-4	07/22/21	770.8	770.8	ND(2)	170	ND(1)	--	--	8.19 J	**1640**	310
WMW-5	07/21/21	753.8	753.8	ND(2)	**400**	ND(1)	--	--	8.03 J	**4340 J**	**2000**
WMW-5 Dup	07/21/21	753.4	753.4	ND(2)	**390**	0.59J/ND(1)U*	--	--	8.11 J	**4310 J**	**2000**
WMW-6	08/19/21	454	454	ND(2)	60	--	ND(0.1)	ND(0.1)	8.12 J	968	260
WMW-7	07/22/21	740.9	734.4	6.48	200	ND(1)	--	--	8.37 J	**2620**	**1000**
WMW-7 Dup	07/22/21	740.5	727.6	12.88	200	ND(1)	--	--	8.44 J	**2720**	**1100**
WMW-8	07/21/21	527.6	522.6	5.04	33	ND(1)	--	--	8.37 J	875 J	180
WMW-9	07/21/21	1426	1357	68.8	**410**	ND(1)	--	--	8.52 J	**2730 J**	3.4 JB
NMED GW Cleanup Level		NA	NA	NA	250	NA	10	1	6 - 9	1,000	600

Notes:
DUP - duplicate sample
NA - Not Applicable
ND - Not detected
ug/L - micrograms per liter
Bolded results exceed the NMED GW Cleanup Level
NMED GW Cleanup Level - New Mexico Environment Department Groundwater Cleanup Levels, New Mexico Administrative Code 20.6.2.3103
J - Estimated concentration
U - Evaluated to be undetected at the reported concent
JB - Estimated concentration due to blank contamination
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.

ProjectDirect: Analytical Table 4-4. Gen Chem PK:8111 RK:97420

Appendix A: WMW-9 Boring Log

Trihydro CORPORATION

Lithology Log

Sheet 1 of 1

LOCID: **WMW-9**

Project Name	Project Number	Site ID
Wingate Benzene Investigation Phase III	**697-072-003**	**Marathon Wingate Facility, Gallup NM**

Drilling Company	Driller	Ground Elevation	Total Drilled Depth
Terracon	**Jeff Cothron**		**15'**

Drilling Equipment	Drilling Method	Borehole Diameter	Date/Time Drilling Started	Date/Time Total Depth Reached
Track mounted drill rig	**Hollow stem auger**	**12.5"**	**4/7/2020 @ 14:00**	**4/7/2021 @ 15:30**

Type of Sampling Device	Water Level (bgs)	
	First	Final

Sample Hammer	Hydrogeologist	Checked by/Date
Type Driving Wt. Drop	**Wallace Coles**	

Location Description (include sketch in field logbook)
Marathon Wingate Facility. Outside the SE corner of the faciliy fence. Between the fence and the rail spur.

Depth	Interval	Recovery	Blow Counts	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	ASTM Code	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, odor, organic vapor measurements, etc.)
0-6				Hard red silty Clay, some fine to coarse grained sand, dry							0-1': TOV = 0.51 ppm Benzene = 0 ppm 5-6': TOV = 18.75 ppm Benzene = 0 ppm
6-6.5				Brown, fine to coarse grained sandy CLAY, saturated							
6.5-15				Brown fine to coarse grained SAND, saturated							9-10ft: TOV = 20.11 ppm Benzene = 16.81 ppm 14-15': TOV = 18.75 ppm Benzene = 10.34 ppm
				Boring terminated at 15' below ground surface(bgs) Well installed at 15' bgs. Well screen installed 5' - 15' Well riser installed 5' - 0'							

Appendix B: Field Logs

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-1R		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	13:12	6.91	19.0	4.58	2990	2.47	1.07	210.6
GAUGE TIME	13:08	1	13:15	6.95	18.5	2.50	1625	1.29	1.50	165.3
DHC (FEET)	-	2	13:18	6.92	18.9	4.89	3152	2.51	1.14	136
DTW (FEET)	10.97	3	13:21	6.94	19.2	4.90	3185	2.64	1.19	122.2
DTB (FEET)	19.12	4	13:24	6.94	19.0	4.98	3250	2.70	1.16	107.6
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 89°F
SAMPLE TIME	13:30	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method, soft bottom

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	14:50	7.23	18.4	5.96	3880	3.26	1.18	-76.7
GAUGE TIME	14:45	1	14:53	7.24	17.9	5.95	3887	3.27	1.29	-84.6
DHC (FEET)	-	2	14:56	7.26	17.7	6.01	3905	3.28	1.33	-91.4
DTW (FEET)	6.81	3								
DTB (FEET)	20.10	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 89°F
SAMPLE TIME	15:00	**WATER APPEARANCE / ODOR:** Clear/HC Odor
		COMMENTS: Low Flow Sampling Method, strong HC noticed when opening the well

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	12:28	7.14	18.9	8.58	5577	4.80	1.74	279.5
GAUGE TIME	12:25	1	12:31	7.18	18.2	8.39	5453	4.69	1.67	278.8
DHC (FEET)	-	2	12:34	7.12	18.0	8.52	5538	4.77	1.70	275.3
DTW (FEET)	8.38	3								
DTB (FEET)	10.15	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 89°F
SAMPLE TIME	12:40	**WATER APPEARANCE / ODOR:** Suspended fines - brown/opaque/No Odor
		COMMENTS: Low Flow Sampling Method

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-4		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/22/2021	Initial	8:12	7.53	15.7	2.40	1560	1.24	1.38	-20.9
GAUGE TIME	8:08	1	8:15	7.50	15.7	2.40	1560	1.24	1.42	-25.8
DHC (FEET)	-	2	8:18	7.50	15.6	2.39	1553	1.24	1.25	-40.4
DTW (FEET)	9.63	3								
DTB (FEET)	21.01	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/22/2021	**WEATHER CONDITIONS:** Cloudy, 72°F
SAMPLE TIME	8:30	**WATER APPEARANCE / ODOR:** Clear - suspended sand/No Odor
		COMMENTS: Low Flow Sampling Method

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-5		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	13:58	7.00	18.4	5.69	3705	3.10	1.74	191.2
GAUGE TIME	13:55	1	14:01	6.98	18.1	5.69	3698	3.10	1.72	190.2
DHC (FEET)	-	2	14:04	6.97	17.9	5.66	3679	3.08	1.65	191.8
DTW (FEET)	8.22	3								
DTB (FEET)	20.15	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 89°F
SAMPLE TIME	14:10	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method - Dup/EB/FB collected

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-6		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	8/19/2021	Initial	10:03	7.74	15.3	0.72	468	0.35	1.42	175.1
GAUGE TIME	9:50	1	10:06	7.67	14.8	0.68	442	0.33	1.58	177.3
DHC (FEET)	-	2	10:10	7.66	14.6	0.74	494	0.37	1.55	176.8
DTW (FEET)	12.81	3								
DTB (FEET)	36.91	4								
CAPACITY PER FOOT	0.163 - 2"	6								

SAMPLING DATA

SAMPLE DATE	8/19/2021	**WEATHER CONDITIONS:** Sunny, 75°F
SAMPLE TIME	10:15	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE
		WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-7		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/22/2021	Initial	7:19	8.15	14.7	3.44	2236	1.82	4.89	261.1
GAUGE TIME	7:15	1	7:22	8.13	15.0	3.43	2229	1.81	4.96	256.6
DHC (FEET)	-	2	7:25	8.14	14.9	3.43	2229	1.81	5.05	254.9
DTW (FEET)	9.3	3								
DTB (FEET)	17.83	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/22/2021	**WEATHER CONDITIONS:** Cloudy, 72°F
SAMPLE TIME	7:30	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method - Dup/EB/FB collected

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-8		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	11:39	7.55	15.4	1.28	832	0.64	1.42	286.1
GAUGE TIME	11:35	1	11:41	7.61	13.9	1.21	786	0.60	1.38	289.7
DHC (FEET)	-	2	11:44	7.62	13.4	1.33	864	0.67	1.19	289.5
DTW (FEET)	9.18	3	11:47	7.63	13.6	1.32	858	0.67	1.22	289.2
DTB (FEET)	38.95	4								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 83°F
SAMPLE TIME	11:55	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

WESTERN REFINING - GALLUP WINGATE FACILITY

2021 ANNUAL GROUNDWATER SAMPLING

WELL ID		TEST PARAMETERS								
WMW-9		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	7/21/2021	Initial	8:22	7.8	16.70	1.99	1287	1.02	1.16	257.6
GAUGE TIME	8:18	1	8:25	8.0	16.90	3.37	2195	1.77	1.31	180.1
DHC (FEET)	-	2	8:29	8.0	16.30	3.61	2340	1.90	1.29	132.4
DTW (FEET)	6.97	3	8:32	8.0	16.20	3.62	2353	1.92	1.17	123.1
DTB (FEET)	15.02	4	8:35	8.0	16.10	3.60	2340	1.91	1.04	120.1
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

SAMPLING DATA

SAMPLE DATE	7/21/2021	**WEATHER CONDITIONS:** Sunny, 69°F
SAMPLE TIME	8:40	**WATER APPEARANCE / ODOR:** Clear/No Odor
		COMMENTS: Low Flow Sampling Method
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE
		WATER QUALITY METER

COMPLETED BY: Brian McLoughlin

Appendix C: Laboratory Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 28, 2021

Vernon Marcum

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2021 Wingate Annual Sampling OrderNo.: 2107C52

Dear Vernon Marcum:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/23/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-FB-7/21/2021
Project: 2021 Wingate Annual Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C52-001 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Toluene	0.27	0.20	1.0	J	µg/L	1	7/27/2021 12:53:49 PM	A80133
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Acetone	6.4	2.5	10	J	µg/L	1	7/27/2021 12:53:49 PM	A80133
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 12:53:49 PM	A80133
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 12:53:49 PM	A80133
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-FB-7/21/2021
Project: 2021 Wingate Annual Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C52-001 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 12:53:49 PM	A80133
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 12:53:49 PM	A80133
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 12:53:49 PM	A80133
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 12:53:49 PM	A80133
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	7/27/2021 12:53:49 PM	A80133
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	7/27/2021 12:53:49 PM	A80133
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	7/27/2021 12:53:49 PM	A80133
Surr: Toluene-d8	105	0	70-130		%Rec	1	7/27/2021 12:53:49 PM	A80133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-FB-7/22/2021
Project: 2021 Wingate Annual Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C52-002 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Toluene	0.30	0.20	1.0	J	µg/L	1	7/27/2021 1:20:55 PM	A80133
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Acetone	6.6	2.5	10	J	µg/L	1	7/27/2021 1:20:55 PM	A80133
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 1:20:55 PM	A80133
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 1:20:55 PM	A80133
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-FB-7/22/2021
Project: 2021 Wingate Annual Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C52-002 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 1:20:55 PM	A80133
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
4-Methyl-2-pentanone	0.89	0.88	10	J	µg/L	1	7/27/2021 1:20:55 PM	A80133
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 1:20:55 PM	A80133
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 1:20:55 PM	A80133
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	7/27/2021 1:20:55 PM	A80133
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	7/27/2021 1:20:55 PM	A80133
Surr: Dibromofluoromethane	99.6	0	70-130		%Rec	1	7/27/2021 1:20:55 PM	A80133
Surr: Toluene-d8	102	0	70-130		%Rec	1	7/27/2021 1:20:55 PM	A80133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** TRIP BLANK
Project: 2021 Wingate Annual Sampling **Collection Date:**
Lab ID: 2107C52-003 **Matrix:** TRIP BLANK **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Acetone	ND	2.5	10		µg/L	1	7/27/2021 1:48:03 PM	A80133
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 1:48:03 PM	A80133
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 1:48:03 PM	A80133
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C52**
Date Reported: **7/28/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 2021 Wingate Annual Sampling
Collection Date:
Lab ID: 2107C52-003
Matrix: TRIP BLANK
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 1:48:03 PM	A80133
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 1:48:03 PM	A80133
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 1:48:03 PM	A80133
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 1:48:03 PM	A80133
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	7/27/2021 1:48:03 PM	A80133
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	7/27/2021 1:48:03 PM	A80133
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	7/27/2021 1:48:03 PM	A80133
Surr: Toluene-d8	102	0	70-130		%Rec	1	7/27/2021 1:48:03 PM	A80133

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C52**
28-Jul-21

Client: Marathon
Project: 2021 Wingate Annual Sampling

Sample ID: **100ng lcs4** SampType: **LCS4** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **A80133** RunNo: **80133**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2821299** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Ethylbenzene	20	1.0	20.00	0	97.7	70	130			
Methyl tert-butyl ether (MTBE)	37	1.0	40.00	0	91.8	70	130			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	95.8	70	130			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	97.4	70	130			
1,2-Dichloroethane (EDC)	20	1.0	20.00	0	102	70	130			
1,2-Dibromoethane (EDB)	20	1.0	20.00	0	99.5	70	130			
Naphthalene	19	2.0	20.00	0	92.9	70	130			
1-Methylnaphthalene	18	4.0	20.00	0	92.0	70	130			
2-Methylnaphthalene	19	4.0	20.00	0	97.3	70	130			
Acetone	35	10	40.00	0	86.9	55.4	145			
Bromobenzene	21	1.0	20.00	0	104	70	130			
Bromodichloromethane	20	1.0	20.00	0	101	70	130			
Bromoform	21	1.0	20.00	0	105	70	130			
Bromomethane	18	3.0	20.00	0	87.5	33.5	169			
2-Butanone	38	10	40.00	0	93.9	58.8	140			
Carbon disulfide	39	10	40.00	0	96.8	70	130			
Carbon Tetrachloride	20	1.0	20.00	0	99.3	70	130			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			
Chloroethane	23	2.0	20.00	0	113	51.4	145			
Chloroform	20	1.0	20.00	0	102	70	130			
Chloromethane	20	3.0	20.00	0	100	37.9	148			
2-Chlorotoluene	19	1.0	20.00	0	95.5	70	130			
4-Chlorotoluene	19	1.0	20.00	0	97.0	70	130			
cis-1,2-DCE	23	1.0	20.00	0	115	70	130			
cis-1,3-Dichloropropene	20	1.0	20.00	0	97.6	70	130			
1,2-Dibromo-3-chloropropane	20	2.0	20.00	0	102	70	130			
Dibromochloromethane	20	1.0	20.00	0	101	70	130			
Dibromomethane	19	1.0	20.00	0	97.4	70	130			
1,2-Dichlorobenzene	20	1.0	20.00	0	99.1	70	130			
1,3-Dichlorobenzene	20	1.0	20.00	0	101	70	130			
1,4-Dichlorobenzene	20	1.0	20.00	0	99.2	70	130			
Dichlorodifluoromethane	19	1.0	20.00	0	96.6	40.4	152			
1,1-Dichloroethane	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.3	70	130			
1,2-Dichloropropane	21	1.0	20.00	0	105	69.3	130			
1,3-Dichloropropane	20	1.0	20.00	0	99.1	70	130			
2,2-Dichloropropane	20	2.0	20.00	0	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C52**
28-Jul-21

Client: Marathon
Project: 2021 Wingate Annual Sampling

Sample ID: **100ng lcs4** SampType: **LCS4** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **A80133** RunNo: **80133**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2821299** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	20	1.0	20.00	0	102	70	130			
Hexachlorobutadiene	19	1.0	20.00	0	97.4	70	130			
2-Hexanone	38	10	40.00	0	95.9	70	130			
Isopropylbenzene	20	1.0	20.00	0	102	70	130			
4-Isopropyltoluene	20	1.0	20.00	0	100	70	130			
4-Methyl-2-pentanone	42	10	40.00	0	104	70	130			
Methylene Chloride	23	3.0	20.00	0	114	70	130			
n-Butylbenzene	21	3.0	20.00	0	103	70	130			
n-Propylbenzene	20	1.0	20.00	0	98.9	70	130			
sec-Butylbenzene	18	1.0	20.00	0	92.2	70	130			
Styrene	19	1.0	20.00	0	96.3	70	130			
tert-Butylbenzene	19	1.0	20.00	0	95.9	70	130			
1,1,1,2-Tetrachloroethane	20	1.0	20.00	0	101	70	130			
1,1,2,2-Tetrachloroethane	22	2.0	20.00	0	112	70	130			
Tetrachloroethene (PCE)	20	1.0	20.00	0	101	70	130			
trans-1,2-DCE	21	1.0	20.00	0	104	70	130			
trans-1,3-Dichloropropene	20	1.0	20.00	0	99.0	70	130			
1,2,3-Trichlorobenzene	20	1.0	20.00	0	99.8	70	130			
1,2,4-Trichlorobenzene	20	1.0	20.00	0	100	70	130			
1,1,1-Trichloroethane	20	1.0	20.00	0	100	70	130			
1,1,2-Trichloroethane	20	1.0	20.00	0	98.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.1	70	130			
Trichlorofluoromethane	21	1.0	20.00	0	103	70	130			
1,2,3-Trichloropropane	19	2.0	20.00	0	92.7	70	130			
Vinyl chloride	22	1.0	20.00	0	110	57.9	134			
Xylenes, Total	59	1.5	60.00	0	98.1	70	130			
Acrolein	37	10	40.00	0	92.7	70	130			
Acrylonitrile	18	10	20.00	0	92.5	70	130			
Bromochloromethane	22	1.0	20.00	0	110	70	130			
Iodomethane	43	10	40.00	0	107	20.4	134			
trans-1,4-Dichloro-2-butene	23	10	20.00	0	113	70	130			
Vinyl acetate	46	10	40.00	0	116	65.9	407			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		99.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C52**
28-Jul-21

Client: Marathon
Project: 2021 Wingate Annual Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A80133**	RunNo: **80133**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2821304** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C52**
28-Jul-21

Client: Marathon
Project: 2021 Wingate Annual Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A80133**	RunNo: **80133**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2821304** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon** Work Order Number: **2107C52** RcptNo: 1

Received By: **Desiree Dominguez** **7/23/2021 4:57:00 PM** DD

Completed By: **Isaiah Ortiz** **7/26/2021 8:03:21 AM** I-Ox

Reviewed By: SPA 7.26.21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: KPA 7/26/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Not Present			

Chain-of-Custody Record

Client: MARATHON

Gallup Refinery

Mailing Address:

92 GIANT CROSSING RD, GALLUP, NM 87301

Phone #: ~~505-722-3833~~

email or Fax#: ~~505-863-0930~~

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time:
☐ Standard Rush: X

Project Name: 2021 W-gate Annual Sampling
~~CARBON CANISTER~~

Project #: 697-080-001
~~WWTP - BWON~~

Project Manager:
VMARCUM@MARATHONPETROLEUM.COM

Sampler: WWTP OPS / CJOHNSON

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.9-0.0=4.9°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2107152	8260+MTBE (SHORT LIST)	SPEC COND; Ph	8015B (DRO)	CATIONS	ANIONS	8260	Air Bubbles (Y or N)
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		Aqueous	______ Carbon Canister	MISC	MISC		X	X	X	X	X		
		~~Soil~~											
	KPG 7/26/21												
7/21	13:30	water	WG-FB-7/21/2021			001						X	
7/22	7:30	water	WG-FB-7/22/2021			002						X	
KPG 7/26/21			Trip Blank KPG 7/26/21			003							

Date: 7/23/21 Time: 14:00 Relinquished by: [signature] Received by: [signature] Courier Date 7/23/21 Time 16:57

Date: Time: Relinquished by: Received by: Date Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
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August 11, 2021

Brian McLoughlin

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2021 Wingate Annual GW Sampling OrderNo.: 2107C54

Dear Brian McLoughlin:

Hall Environmental Analysis Laboratory received 13 sample(s) on 7/23/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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Case Narrative

WO#: **2107C54**
Date: **8/11/2021**

CLIENT: Marathon
Project: 2021 Wingate Annual GW Sampling

Analytical Notes Regarding EPA Method 8270:
The following two 8270 samples are associated with a low internal standard. A low internal standad could bias the data high, however both of these sample are nondetect.

WG-DUP-7/21/2021
WG-EB-7/22/2021

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-1R
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 1:30:00 PM
Lab ID: 2107C54-001 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	470	12	25	*	mg/L	50	7/27/2021 4:38:51 PM	R80124
Sulfate	1700	12	25	*	mg/L	50	7/27/2021 4:38:51 PM	R80124
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/27/2021 1:23:44 AM	R80092
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.060	0.0011	0.0020		mg/L	1	7/27/2021 1:06:26 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:06:26 PM	A80106
Calcium	290	0.57	5.0		mg/L	5	7/27/2021 1:08:10 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:06:26 PM	A80106
Silver	0.0016	0.0013	0.0050	J	mg/L	1	7/27/2021 1:06:26 PM	A80106
Sodium	1000	2.7	20		mg/L	20	7/27/2021 1:48:59 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.020	0.00061	0.0050	*	mg/L	5	8/2/2021 11:49:46 AM	B80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 4:54:17 PM	B80079
Selenium	ND	0.0017	0.0050		mg/L	5	8/2/2021 11:49:46 AM	B80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.031	0.00034	0.0025	*	mg/L	5	7/29/2021 2:52:48 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 9:49:38 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Aniline	ND	0.50	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Anthracene	ND	0.75	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Azobenzene	ND	0.55	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzoic acid	ND	1.1	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Bis(2-ethylhexyl)phthalate	4.9	4.5	10	J	µg/L	1	7/30/2021 4:10:44 PM	61579
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
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ND	Not Detected at the Reporting Limit
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-1R
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-001
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Chrysene	ND	0.71	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/30/2021 4:10:44 PM	61579
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/30/2021 4:10:44 PM	61579
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Diethyl phthalate	ND	3.9	10		µg/L	1	7/30/2021 4:10:44 PM	61579
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Fluoranthene	ND	3.5	10		µg/L	1	7/30/2021 4:10:44 PM	61579
Fluorene	ND	0.44	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Isophorone	ND	0.40	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Naphthalene	ND	2.2	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-1R
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 1:30:00 PM
Lab ID: 2107C54-001 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Pentachlorophenol	ND	0.59	20		µg/L	1	7/30/2021 4:10:44 PM	61579
Phenanthrene	ND	0.79	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Phenol	ND	0.33	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Pyrene	ND	1.3	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Pyridine	ND	0.93	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/30/2021 4:10:44 PM	61579
Surr: 2-Fluorophenol	39.6	0	15-88.8		%Rec	1	7/30/2021 4:10:44 PM	61579
Surr: Phenol-d5	38.6	0	15-71.9		%Rec	1	7/30/2021 4:10:44 PM	61579
Surr: 2,4,6-Tribromophenol	70.6	0	15-97.4		%Rec	1	7/30/2021 4:10:44 PM	61579
Surr: Nitrobenzene-d5	56.3	0	15-117		%Rec	1	7/30/2021 4:10:44 PM	61579
Surr: 2-Fluorobiphenyl	61.9	0	15-100		%Rec	1	7/30/2021 4:10:44 PM	61579
Surr: 4-Terphenyl-d14	79.8	0	15-120		%Rec	1	7/30/2021 4:10:44 PM	61579
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Acetone	4.6	2.5	10	J	µg/L	1	7/27/2021 5:25:31 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
2-Butanone	2.2	2.0	10	J	µg/L	1	7/27/2021 5:25:31 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 5:25:31 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-1R
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-001
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 5:25:31 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 5:25:31 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-1R
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-001
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 5:25:31 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 5:25:31 PM	A80126
Surr: 1,2-Dichloroethane-d4	99.8	0	70-130		%Rec	1	7/27/2021 5:25:31 PM	A80126
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	7/27/2021 5:25:31 PM	A80126
Surr: Dibromofluoromethane	98.4	0	70-130		%Rec	1	7/27/2021 5:25:31 PM	A80126
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	7/27/2021 5:25:31 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	7.68			H	pH units	1	8/2/2021 9:21:06 PM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	810.9	20.00	20.00		mg/L Ca	1	8/2/2021 9:21:06 PM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/2/2021 9:21:06 PM	R80263
Total Alkalinity (as CaCO3)	810.9	20.00	20.00		mg/L Ca	1	8/2/2021 9:21:06 PM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	3920	100	100	*D	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-2
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 3:00:00 PM
Lab ID: 2107C54-002 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	990	25	50	*	mg/L	100	7/27/2021 4:51:43 PM	R80124
Sulfate	ND	1.2	2.5		mg/L	5	7/26/2021 7:23:21 PM	R80092
Nitrate+Nitrite as N	1.0	0.11	1.0		mg/L	5	7/27/2021 2:15:50 AM	R80092
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.66	0.0011	0.0020		mg/L	1	7/27/2021 1:09:54 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:09:54 PM	A80106
Calcium	44	0.11	1.0		mg/L	1	7/27/2021 1:09:54 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:09:54 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:09:54 PM	A80106
Sodium	1600	2.7	20		mg/L	20	7/27/2021 1:50:41 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00041	0.00012	0.0010	J	mg/L	1	8/2/2021 11:52:29 AM	B80249
Lead	ND	0.000057	0.00050		mg/L	1	8/2/2021 11:52:29 AM	B80249
Selenium	0.0013	0.00034	0.0010		mg/L	1	8/2/2021 11:52:29 AM	B80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	ND	0.000069	0.00050		mg/L	1	7/29/2021 1:35:39 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 9:52:03 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	1.6	0.50	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Aniline	ND	0.50	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Anthracene	ND	0.75	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Azobenzene	ND	0.55	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzoic acid	ND	1.1	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Bis(2-ethylhexyl)phthalate	5.0	4.5	10	J	µg/L	1	7/30/2021 4:53:18 PM	61579
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-2
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 3:00:00 PM
Lab ID: 2107C54-002
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	4.1	0.56	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Chrysene	ND	0.71	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/30/2021 4:53:18 PM	61579
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/30/2021 4:53:18 PM	61579
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Dibenzofuran	2.6	0.38	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Diethyl phthalate	ND	3.9	10		µg/L	1	7/30/2021 4:53:18 PM	61579
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Fluoranthene	4.7	3.5	10	J	µg/L	1	7/30/2021 4:53:18 PM	61579
Fluorene	3.4	0.44	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Isophorone	ND	0.40	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
1-Methylnaphthalene	3.5	0.60	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
2-Methylnaphthalene	5.0	0.41	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Naphthalene	9.6	2.2	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-2
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 3:00:00 PM
Lab ID: 2107C54-002 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Pentachlorophenol	ND	0.59	20		µg/L	1	7/30/2021 4:53:18 PM	61579
Phenanthrene	4.1	0.79	5.0	J	µg/L	1	7/30/2021 4:53:18 PM	61579
Phenol	20	0.33	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Pyrene	ND	1.3	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Pyridine	ND	0.93	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/30/2021 4:53:18 PM	61579
Surr: 2-Fluorophenol	37.2	0	15-88.8		%Rec	1	7/30/2021 4:53:18 PM	61579
Surr: Phenol-d5	31.3	0	15-71.9		%Rec	1	7/30/2021 4:53:18 PM	61579
Surr: 2,4,6-Tribromophenol	68.7	0	15-97.4		%Rec	1	7/30/2021 4:53:18 PM	61579
Surr: Nitrobenzene-d5	45.5	0	15-117		%Rec	1	7/30/2021 4:53:18 PM	61579
Surr: 2-Fluorobiphenyl	43.6	0	15-100		%Rec	1	7/30/2021 4:53:18 PM	61579
Surr: 4-Terphenyl-d14	77.9	0	15-120		%Rec	1	7/30/2021 4:53:18 PM	61579
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	27000	110	500		µg/L	500	7/31/2021 11:03:52 PM	R80239
Toluene	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Ethylbenzene	97	1.1	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	2.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2,4-Trimethylbenzene	33	0.61	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,3,5-Trimethylbenzene	ND	0.91	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2-Dichloroethane (EDC)	1.3	1.3	5.0	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2-Dibromoethane (EDB)	ND	1.5	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Naphthalene	24	2.5	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
1-Methylnaphthalene	9.0	4.2	20	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
2-Methylnaphthalene	15	3.5	20	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
Acetone	20	13	50	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
Bromobenzene	ND	1.4	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Bromodichloromethane	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Bromoform	ND	1.6	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Bromomethane	ND	4.3	15		µg/L	5	7/27/2021 5:54:10 PM	A80126
2-Butanone	ND	10	50		µg/L	5	7/27/2021 5:54:10 PM	A80126
Carbon disulfide	ND	3.0	50		µg/L	5	7/27/2021 5:54:10 PM	A80126

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-2
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 3:00:00 PM
Lab ID: 2107C54-002
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.88	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Chlorobenzene	ND	0.78	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Chloroethane	ND	1.9	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
Chloroform	ND	0.67	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Chloromethane	11	2.1	15	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
2-Chlorotoluene	ND	0.66	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
4-Chlorotoluene	ND	1.7	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
cis-1,3-Dichloropropene	ND	1.8	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2-Dibromo-3-chloropropane	ND	2.9	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
Dibromochloromethane	ND	1.4	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Dibromomethane	ND	1.5	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2-Dichlorobenzene	ND	0.77	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,3-Dichlorobenzene	ND	0.81	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,4-Dichlorobenzene	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Dichlorodifluoromethane	ND	2.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1-Dichloroethane	ND	1.4	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,3-Dichloropropane	ND	0.90	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
2,2-Dichloropropane	ND	1.3	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1-Dichloropropene	ND	0.90	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Hexachlorobutadiene	ND	2.8	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
2-Hexanone	ND	9.0	50		µg/L	5	7/27/2021 5:54:10 PM	A80126
Isopropylbenzene	4.6	0.91	5.0	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
4-Isopropyltoluene	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
4-Methyl-2-pentanone	21	4.4	50	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
Methylene Chloride	ND	2.5	15		µg/L	5	7/27/2021 5:54:10 PM	A80126
n-Butylbenzene	ND	1.3	15		µg/L	5	7/27/2021 5:54:10 PM	A80126
n-Propylbenzene	3.2	0.91	5.0	J	µg/L	5	7/27/2021 5:54:10 PM	A80126
sec-Butylbenzene	ND	0.72	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Styrene	ND	0.68	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
tert-Butylbenzene	ND	1.2	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1,2,2-Tetrachloroethane	ND	1.4	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
Tetrachloroethene (PCE)	ND	1.8	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
trans-1,2-DCE	ND	0.97	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
trans-1,3-Dichloropropene	ND	1.7	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2,3-Trichlorobenzene	ND	1.2	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-2
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 3:00:00 PM
Lab ID: 2107C54-002
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	1.2	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1,1-Trichloroethane	ND	1.5	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,1,2-Trichloroethane	ND	0.99	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Trichloroethene (TCE)	ND	1.0	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Trichlorofluoromethane	ND	0.79	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
1,2,3-Trichloropropane	ND	2.2	10		µg/L	5	7/27/2021 5:54:10 PM	A80126
Vinyl chloride	ND	1.6	5.0		µg/L	5	7/27/2021 5:54:10 PM	A80126
Xylenes, Total	130	1.9	7.5		µg/L	5	7/27/2021 5:54:10 PM	A80126
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	5	7/27/2021 5:54:10 PM	A80126
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	5	7/27/2021 5:54:10 PM	A80126
Surr: Dibromofluoromethane	94.8	0	70-130		%Rec	5	7/27/2021 5:54:10 PM	A80126
Surr: Toluene-d8	91.6	0	70-130		%Rec	5	7/27/2021 5:54:10 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.06			H	pH units	1	8/2/2021 9:50:36 PM	R80263
SM2320B: ALKALINITY							Analyst: **JRR**	
Bicarbonate (As CaCO3)	2070	50.00	50.00		mg/L Ca	2.5	8/3/2021 6:13:27 PM	R80275
Carbonate (As CaCO3)	106.4	5.000	5.000		mg/L Ca	2.5	8/3/2021 6:13:27 PM	R80275
Total Alkalinity (as CaCO3)	2176	50.00	50.00		mg/L Ca	2.5	8/3/2021 6:13:27 PM	R80275
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	3940	100	100	*D	mg/L	1	7/29/2021 2:39:00 PM	61618

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-3
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 12:40:00 PM
Lab ID: 2107C54-003 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	1200	25	50	*	mg/L	100	7/27/2021 5:04:36 PM	R80124
Sulfate	2300	25	50	*	mg/L	100	7/27/2021 5:04:36 PM	R80124
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/27/2021 2:28:08 AM	R80092
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.038	0.0011	0.0020		mg/L	1	7/27/2021 1:12:52 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:12:52 PM	A80106
Calcium	160	0.57	5.0		mg/L	5	7/27/2021 1:14:24 PM	A80106
Chromium	0.0020	0.0020	0.0060	J	mg/L	1	7/27/2021 1:12:52 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:12:52 PM	A80106
Sodium	2000	6.9	50		mg/L	50	7/27/2021 1:52:24 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0019	0.00061	0.0050	J	mg/L	5	8/2/2021 12:03:22 PM	C80249
Lead	0.0038	0.00028	0.0025		mg/L	5	7/26/2021 5:03:45 PM	B80079
Selenium	0.0026	0.0017	0.0050	J	mg/L	5	8/2/2021 12:03:22 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.014	0.000069	0.00050		mg/L	1	7/29/2021 1:38:03 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00024	0.00040		mg/L	1	7/28/2021 9:54:27 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Aniline	ND	0.50	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Anthracene	ND	0.75	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Azobenzene	ND	0.55	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzoic acid	ND	1.1	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Benzyl alcohol	1.5	0.68	5.0	J	µg/L	1	7/30/2021 5:35:37 PM	61579
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Bis(2-ethylhexyl)phthalate	4.7	4.5	10	J	µg/L	1	7/30/2021 5:35:37 PM	61579
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-3
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 12:40:00 PM
Lab ID: 2107C54-003
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Chrysene	ND	0.71	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/30/2021 5:35:37 PM	61579
Di-n-octyl phthalate	6.8	3.1	20	J	µg/L	1	7/30/2021 5:35:37 PM	61579
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Diethyl phthalate	ND	3.9	10		µg/L	1	7/30/2021 5:35:37 PM	61579
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Fluoranthene	ND	3.5	10		µg/L	1	7/30/2021 5:35:37 PM	61579
Fluorene	ND	0.44	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Isophorone	ND	0.40	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Naphthalene	ND	2.2	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-3
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 12:40:00 PM
Lab ID: 2107C54-003 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Pentachlorophenol	ND	0.59	20		µg/L	1	7/30/2021 5:35:37 PM	61579
Phenanthrene	ND	0.79	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Phenol	ND	0.33	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Pyrene	ND	1.3	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Pyridine	ND	0.93	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/30/2021 5:35:37 PM	61579
Surr: 2-Fluorophenol	48.1	0	15-88.8		%Rec	1	7/30/2021 5:35:37 PM	61579
Surr: Phenol-d5	47.7	0	15-71.9		%Rec	1	7/30/2021 5:35:37 PM	61579
Surr: 2,4,6-Tribromophenol	54.8	0	15-97.4		%Rec	1	7/30/2021 5:35:37 PM	61579
Surr: Nitrobenzene-d5	72.0	0	15-117		%Rec	1	7/30/2021 5:35:37 PM	61579
Surr: 2-Fluorobiphenyl	69.2	0	15-100		%Rec	1	7/30/2021 5:35:37 PM	61579
Surr: 4-Terphenyl-d14	77.1	0	15-120		%Rec	1	7/30/2021 5:35:37 PM	61579
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Toluene	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Naphthalene	ND	0.50	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Acetone	ND	2.5	10		µg/L	1	7/30/2021 5:48:26 PM	R80215
Bromobenzene	ND	0.28	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Bromoform	ND	0.31	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Bromomethane	ND	0.85	3.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
2-Butanone	ND	2.0	10		µg/L	1	7/30/2021 5:48:26 PM	R80215
Carbon disulfide	ND	0.59	10		µg/L	1	7/30/2021 5:48:26 PM	R80215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-3
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 12:40:00 PM
Lab ID: 2107C54-003 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Chloroethane	ND	0.38	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Chloroform	ND	0.13	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Chloromethane	ND	0.41	3.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Dibromomethane	ND	0.31	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
2-Hexanone	ND	1.8	10		µg/L	1	7/30/2021 5:48:26 PM	R80215
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/30/2021 5:48:26 PM	R80215
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Styrene	ND	0.14	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-3
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 12:40:00 PM
Lab ID: 2107C54-003
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/30/2021 5:48:26 PM	R80215
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/30/2021 5:48:26 PM	R80215
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	7/30/2021 5:48:26 PM	R80215
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	7/30/2021 5:48:26 PM	R80215
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	7/30/2021 5:48:26 PM	R80215
Surr: Toluene-d8	101	0	70-130		%Rec	1	7/30/2021 5:48:26 PM	R80215
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.07			H	pH units	1	8/2/2021 10:35:29 PM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	1082	20.00	20.00		mg/L Ca	1	8/2/2021 10:35:29 PM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/2/2021 10:35:29 PM	R80263
Total Alkalinity (as CaCO3)	1082	20.00	20.00		mg/L Ca	1	8/2/2021 10:35:29 PM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	6580	200	200	*D	mg/L	1	7/29/2021 2:39:00 PM	61618

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-4
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 8:30:00 AM
Lab ID: 2107C54-004 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	170	5.0	10		mg/L	20	7/26/2021 8:27:42 PM	R80092
Sulfate	310	5.0	10	*	mg/L	20	7/26/2021 8:27:42 PM	R80092
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/27/2021 2:40:59 AM	R80092
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.053	0.0011	0.0020		mg/L	1	7/27/2021 1:16:08 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:16:08 PM	A80106
Calcium	20	0.11	1.0		mg/L	1	7/27/2021 1:16:08 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:16:08 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:16:08 PM	A80106
Sodium	560	1.4	10		mg/L	10	7/27/2021 1:54:05 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0023	0.00012	0.0010		mg/L	1	8/2/2021 12:06:05 PM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 5:08:28 PM	B80079
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 12:06:05 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.00095	0.000069	0.00050		mg/L	1	7/29/2021 1:40:28 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 9:56:51 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Aniline	ND	0.50	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Anthracene	ND	0.75	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Azobenzene	ND	0.55	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzoic acid	ND	1.1	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Bis(2-ethylhexyl)phthalate	5.5	4.5	10	J	µg/L	1	7/30/2021 6:17:40 PM	61579
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-4
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 8:30:00 AM
Lab ID: 2107C54-004
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Chrysene	ND	0.71	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/30/2021 6:17:40 PM	61579
Di-n-octyl phthalate	6.7	3.1	20	J	µg/L	1	7/30/2021 6:17:40 PM	61579
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Diethyl phthalate	ND	3.9	10		µg/L	1	7/30/2021 6:17:40 PM	61579
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Fluoranthene	ND	3.5	10		µg/L	1	7/30/2021 6:17:40 PM	61579
Fluorene	ND	0.44	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Isophorone	ND	0.40	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Naphthalene	ND	2.2	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-4
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 8:30:00 AM
Lab ID: 2107C54-004 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Pentachlorophenol	ND	0.59	20		µg/L	1	7/30/2021 6:17:40 PM	61579
Phenanthrene	ND	0.79	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Phenol	ND	0.33	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Pyrene	ND	1.3	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Pyridine	ND	0.93	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/30/2021 6:17:40 PM	61579
Surr: 2-Fluorophenol	35.3	0	15-88.8		%Rec	1	7/30/2021 6:17:40 PM	61579
Surr: Phenol-d5	29.1	0	15-71.9		%Rec	1	7/30/2021 6:17:40 PM	61579
Surr: 2,4,6-Tribromophenol	43.8	0	15-97.4		%Rec	1	7/30/2021 6:17:40 PM	61579
Surr: Nitrobenzene-d5	44.3	0	15-117		%Rec	1	7/30/2021 6:17:40 PM	61579
Surr: 2-Fluorobiphenyl	39.5	0	15-100		%Rec	1	7/30/2021 6:17:40 PM	61579
Surr: 4-Terphenyl-d14	84.4	0	15-120		%Rec	1	7/30/2021 6:17:40 PM	61579
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.39	0.23	1.0	J	µg/L	1	7/27/2021 6:51:25 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2-Dichloroethane (EDC)	0.37	0.25	1.0	J	µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Acetone	3.9	2.5	10	J	µg/L	1	7/27/2021 6:51:25 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 6:51:25 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 6:51:25 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-4
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 8:30:00 AM
Lab ID: 2107C54-004 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Chloromethane	1.0	0.41	3.0	J	µg/L	1	7/27/2021 6:51:25 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 6:51:25 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 6:51:25 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-4
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 8:30:00 AM
Lab ID: 2107C54-004 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 6:51:25 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 6:51:25 PM	A80126
Surr: 1,2-Dichloroethane-d4	99.7	0	70-130		%Rec	1	7/27/2021 6:51:25 PM	A80126
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	7/27/2021 6:51:25 PM	A80126
Surr: Dibromofluoromethane	98.1	0	70-130		%Rec	1	7/27/2021 6:51:25 PM	A80126
Surr: Toluene-d8	93.6	0	70-130		%Rec	1	7/27/2021 6:51:25 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.19			H	pH units	1	8/2/2021 11:12:15 PM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	770.8	20.00	20.00		mg/L Ca	1	8/2/2021 11:12:15 PM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/2/2021 11:12:15 PM	R80263
Total Alkalinity (as CaCO3)	770.8	20.00	20.00		mg/L Ca	1	8/2/2021 11:12:15 PM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	1640	100	100	*D	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-5
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 2:10:00 PM
Lab ID: 2107C54-005 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	400	25	50	*	mg/L	100	7/27/2021 5:17:29 PM	R80124
Sulfate	2000	25	50	*	mg/L	100	7/27/2021 5:17:29 PM	R80124
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 6:50:02 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.0073	0.0011	0.0020		mg/L	1	7/27/2021 1:24:35 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:24:35 PM	A80106
Calcium	190	0.57	5.0		mg/L	5	7/27/2021 1:26:18 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:24:35 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:24:35 PM	A80106
Sodium	1200	2.7	20		mg/L	20	7/27/2021 1:55:49 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00064	0.00061	0.0050	J	mg/L	5	8/2/2021 12:08:48 PM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 5:13:12 PM	B80079
Selenium	ND	0.0017	0.0050		mg/L	5	8/2/2021 12:08:48 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.024	0.000069	0.00050		mg/L	1	7/29/2021 1:42:52 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 9:59:14 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Aniline	ND	0.50	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Anthracene	ND	0.75	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Azobenzene	ND	0.55	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzoic acid	ND	1.1	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Bis(2-ethylhexyl)phthalate	ND	4.5	10		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
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S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-5
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 2:10:00 PM
Lab ID: 2107C54-005
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Chrysene	ND	0.71	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/30/2021 6:59:41 PM	61579
Di-n-octyl phthalate	6.6	3.1	20	J	µg/L	1	7/30/2021 6:59:41 PM	61579
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Diethyl phthalate	ND	3.9	10		µg/L	1	7/30/2021 6:59:41 PM	61579
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Fluoranthene	ND	3.5	10		µg/L	1	7/30/2021 6:59:41 PM	61579
Fluorene	ND	0.44	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Isophorone	ND	0.40	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Naphthalene	ND	2.2	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-5
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 2:10:00 PM
Lab ID: 2107C54-005 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Pentachlorophenol	ND	0.59	20		µg/L	1	7/30/2021 6:59:41 PM	61579
Phenanthrene	ND	0.79	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Phenol	ND	0.33	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Pyrene	ND	1.3	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Pyridine	ND	0.93	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/30/2021 6:59:41 PM	61579
Surr: 2-Fluorophenol	36.4	0	15-88.8		%Rec	1	7/30/2021 6:59:41 PM	61579
Surr: Phenol-d5	32.5	0	15-71.9		%Rec	1	7/30/2021 6:59:41 PM	61579
Surr: 2,4,6-Tribromophenol	25.5	0	15-97.4		%Rec	1	7/30/2021 6:59:41 PM	61579
Surr: Nitrobenzene-d5	47.3	0	15-117		%Rec	1	7/30/2021 6:59:41 PM	61579
Surr: 2-Fluorobiphenyl	48.8	0	15-100		%Rec	1	7/30/2021 6:59:41 PM	61579
Surr: 4-Terphenyl-d14	77.4	0	15-120		%Rec	1	7/30/2021 6:59:41 PM	61579
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Acetone	3.8	2.5	10	J	µg/L	1	7/27/2021 7:20:05 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 7:20:05 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 7:20:05 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-5
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 2:10:00 PM
Lab ID: 2107C54-005
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 7:20:05 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 7:20:05 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-5
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 2:10:00 PM
Lab ID: 2107C54-005 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 7:20:05 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 7:20:05 PM	A80126
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	7/27/2021 7:20:05 PM	A80126
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	7/27/2021 7:20:05 PM	A80126
Surr: Dibromofluoromethane	96.9	0	70-130		%Rec	1	7/27/2021 7:20:05 PM	A80126
Surr: Toluene-d8	94.7	0	70-130		%Rec	1	7/27/2021 7:20:05 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.03			H	pH units	1	8/2/2021 11:39:35 PM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	753.8	20.00	20.00		mg/L Ca	1	8/2/2021 11:39:35 PM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/2/2021 11:39:35 PM	R80263
Total Alkalinity (as CaCO3)	753.8	20.00	20.00		mg/L Ca	1	8/2/2021 11:39:35 PM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	4340	20.0	20.0	*	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-7
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 9:30:00 AM
Lab ID: 2107C54-006 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	200	5.0	10		mg/L	20	7/26/2021 9:44:54 PM	R80092
Sulfate	1000	12	25	*	mg/L	50	7/27/2021 5:30:22 PM	R80124
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 7:02:55 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.027	0.0011	0.0020		mg/L	1	7/27/2021 1:27:59 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:27:59 PM	A80106
Calcium	37	0.11	1.0		mg/L	1	7/27/2021 1:27:59 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:27:59 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:27:59 PM	A80106
Sodium	900	1.4	10		mg/L	10	7/27/2021 1:57:33 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00037	0.00012	0.0010	J	mg/L	1	8/2/2021 12:11:31 PM	C80249
Lead	0.000058	0.000057	0.00050	J	mg/L	1	7/26/2021 5:17:56 PM	B80079
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 12:11:31 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.031	0.00034	0.0025	*	mg/L	5	7/29/2021 2:55:12 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:01:37 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Bis(2-ethylhexyl)phthalate	5.2	4.5	10	J	µg/L	1	7/29/2021 11:59:20 AM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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B	Analyte detected in the associated Method Blank
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-7
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 9:30:00 AM
Lab ID: 2107C54-006
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 11:59:20 AM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 11:59:20 AM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 11:59:20 AM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 11:59:20 AM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-7
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 9:30:00 AM
Lab ID: 2107C54-006 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 11:59:20 AM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 11:59:20 AM	61610
Surr: 2-Fluorophenol	15.7	0	15-88.8		%Rec	1	7/29/2021 11:59:20 AM	61610
Surr: Phenol-d5	12.6	0	15-71.9	S	%Rec	1	7/29/2021 11:59:20 AM	61610
Surr: 2,4,6-Tribromophenol	27.1	0	15-97.4		%Rec	1	7/29/2021 11:59:20 AM	61610
Surr: Nitrobenzene-d5	33.3	0	15-117		%Rec	1	7/29/2021 11:59:20 AM	61610
Surr: 2-Fluorobiphenyl	34.6	0	15-100		%Rec	1	7/29/2021 11:59:20 AM	61610
Surr: 4-Terphenyl-d14	112	0	15-120		%Rec	1	7/29/2021 11:59:20 AM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Acetone	3.7	2.5	10	J	µg/L	1	7/27/2021 7:48:41 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 7:48:41 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 7:48:41 PM	A80126

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-7
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 9:30:00 AM
Lab ID: 2107C54-006
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 7:48:41 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 7:48:41 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-7
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 9:30:00 AM
Lab ID: 2107C54-006 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 7:48:41 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 7:48:41 PM	A80126
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	7/27/2021 7:48:41 PM	A80126
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	7/27/2021 7:48:41 PM	A80126
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	7/27/2021 7:48:41 PM	A80126
Surr: Toluene-d8	97.6	0	70-130		%Rec	1	7/27/2021 7:48:41 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.37			H	pH units	1	8/3/2021 12:35:03 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	734.4	20.00	20.00		mg/L Ca	1	8/3/2021 12:35:03 AM	R80263
Carbonate (As CaCO3)	6.480	2.000	2.000		mg/L Ca	1	8/3/2021 12:35:03 AM	R80263
Total Alkalinity (as CaCO3)	740.9	20.00	20.00		mg/L Ca	1	8/3/2021 12:35:03 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	2620	20.0	20.0	*	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-8
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 11:55:00 AM
Lab ID: 2107C54-007 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	33	1.2	2.5		mg/L	5	7/26/2021 9:57:48 PM	R80092
Sulfate	180	1.2	2.5		mg/L	5	7/26/2021 9:57:48 PM	R80092
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 7:15:48 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.0011	0.0020		mg/L	1	7/27/2021 1:31:05 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:31:05 PM	A80106
Calcium	34	0.11	1.0		mg/L	1	7/27/2021 1:31:05 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:31:05 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:31:05 PM	A80106
Sodium	280	0.69	5.0		mg/L	5	7/27/2021 1:32:40 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00053	0.00012	0.0010	J	mg/L	1	8/2/2021 12:14:13 PM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 5:52:19 PM	B80079
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 12:14:13 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.013	0.000069	0.00050		mg/L	1	7/29/2021 1:54:57 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:03:59 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Bis(2-ethylhexyl)phthalate	5.1	4.5	10	J	µg/L	1	7/29/2021 12:41:21 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-8
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 11:55:00 AM
Lab ID: 2107C54-007
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 12:41:21 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 12:41:21 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 12:41:21 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 12:41:21 PM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-8
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 11:55:00 AM
Lab ID: 2107C54-007 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 12:41:21 PM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 12:41:21 PM	61610
Surr: 2-Fluorophenol	26.3	0	15-88.8		%Rec	1	7/29/2021 12:41:21 PM	61610
Surr: Phenol-d5	22.4	0	15-71.9		%Rec	1	7/29/2021 12:41:21 PM	61610
Surr: 2,4,6-Tribromophenol	27.3	0	15-97.4		%Rec	1	7/29/2021 12:41:21 PM	61610
Surr: Nitrobenzene-d5	34.4	0	15-117		%Rec	1	7/29/2021 12:41:21 PM	61610
Surr: 2-Fluorobiphenyl	35.3	0	15-100		%Rec	1	7/29/2021 12:41:21 PM	61610
Surr: 4-Terphenyl-d14	115	0	15-120		%Rec	1	7/29/2021 12:41:21 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Acetone	3.7	2.5	10	J	µg/L	1	7/27/2021 8:17:15 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 8:17:15 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 8:17:15 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WMW-8
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 11:55:00 AM
Lab ID: 2107C54-007
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 8:17:15 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 8:17:15 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-8
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 11:55:00 AM
Lab ID: 2107C54-007 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 8:17:15 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 8:17:15 PM	A80126
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	1	7/27/2021 8:17:15 PM	A80126
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	7/27/2021 8:17:15 PM	A80126
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	7/27/2021 8:17:15 PM	A80126
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	7/27/2021 8:17:15 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.37			H	pH units	1	8/3/2021 1:03:27 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	522.6	20.00	20.00		mg/L Ca	1	8/3/2021 1:03:27 AM	R80263
Carbonate (As CaCO3)	5.040	2.000	2.000		mg/L Ca	1	8/3/2021 1:03:27 AM	R80263
Total Alkalinity (as CaCO3)	527.6	20.00	20.00		mg/L Ca	1	8/3/2021 1:03:27 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	875	20.0	20.0	*	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-9
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 8:40:00 AM
Lab ID: 2107C54-008 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	410	12	25	*	mg/L	50	7/27/2021 5:43:15 PM	R80124
Sulfate	3.4	1.2	2.5		mg/L	5	7/26/2021 10:49:18 PM	R80092
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 7:28:40 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.61	0.0011	0.0020		mg/L	1	7/27/2021 1:34:13 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:34:13 PM	A80106
Calcium	15	0.11	1.0		mg/L	1	7/27/2021 1:34:13 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:34:13 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:34:13 PM	A80106
Sodium	950	2.7	20		mg/L	20	7/27/2021 1:59:17 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.017	0.00012	0.0010	*	mg/L	1	8/2/2021 12:16:56 PM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	8/2/2021 12:16:56 PM	C80249
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 12:16:56 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.0012	0.000069	0.00050		mg/L	1	7/29/2021 1:57:21 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:11:08 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Bis(2-ethylhexyl)phthalate	4.9	4.5	10	J	µg/L	1	7/29/2021 1:23:32 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-9
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 8:40:00 AM
Lab ID: 2107C54-008 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 1:23:32 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 1:23:32 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 1:23:32 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 1:23:32 PM	61610
Fluorene	3.4	0.44	5.0	J	µg/L	1	7/29/2021 1:23:32 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
1-Methylnaphthalene	2.4	0.60	5.0	J	µg/L	1	7/29/2021 1:23:32 PM	61610
2-Methylnaphthalene	1.9	0.41	5.0	J	µg/L	1	7/29/2021 1:23:32 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Naphthalene	5.0	2.2	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-9
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 8:40:00 AM
Lab ID: 2107C54-008 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 1:23:32 PM	61610
Phenanthrene	3.9	0.79	5.0	J	µg/L	1	7/29/2021 1:23:32 PM	61610
Phenol	76	0.33	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 1:23:32 PM	61610
Surr: 2-Fluorophenol	22.7	0	15-88.8		%Rec	1	7/29/2021 1:23:32 PM	61610
Surr: Phenol-d5	19.8	0	15-71.9		%Rec	1	7/29/2021 1:23:32 PM	61610
Surr: 2,4,6-Tribromophenol	59.9	0	15-97.4		%Rec	1	7/29/2021 1:23:32 PM	61610
Surr: Nitrobenzene-d5	32.5	0	15-117		%Rec	1	7/29/2021 1:23:32 PM	61610
Surr: 2-Fluorobiphenyl	32.4	0	15-100		%Rec	1	7/29/2021 1:23:32 PM	61610
Surr: 4-Terphenyl-d14	128	0	15-120	S	%Rec	1	7/29/2021 1:23:32 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	21000	110	500		µg/L	500	7/31/2021 11:32:25 PM	R80239
Toluene	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Ethylbenzene	120	1.1	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	2.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2,4-Trimethylbenzene	17	0.61	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,3,5-Trimethylbenzene	7.4	0.91	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2-Dichloroethane (EDC)	1.5	1.3	5.0	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2-Dibromoethane (EDB)	ND	1.5	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Naphthalene	15	2.5	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
1-Methylnaphthalene	4.4	4.2	20	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
2-Methylnaphthalene	5.7	3.5	20	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
Acetone	16	13	50	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
Bromobenzene	ND	1.4	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Bromodichloromethane	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Bromoform	ND	1.6	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Bromomethane	ND	4.3	15		µg/L	5	7/27/2021 8:45:51 PM	A80126
2-Butanone	ND	10	50		µg/L	5	7/27/2021 8:45:51 PM	A80126
Carbon disulfide	ND	3.0	50		µg/L	5	7/27/2021 8:45:51 PM	A80126

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-9
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 8:40:00 AM
Lab ID: 2107C54-008 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.88	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Chlorobenzene	ND	0.78	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Chloroethane	ND	1.9	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
Chloroform	ND	0.67	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Chloromethane	ND	2.1	15		µg/L	5	7/27/2021 8:45:51 PM	A80126
2-Chlorotoluene	ND	0.66	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
4-Chlorotoluene	ND	1.7	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
cis-1,3-Dichloropropene	ND	1.8	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2-Dibromo-3-chloropropane	ND	2.9	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
Dibromochloromethane	ND	1.4	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Dibromomethane	ND	1.5	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2-Dichlorobenzene	ND	0.77	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,3-Dichlorobenzene	ND	0.81	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,4-Dichlorobenzene	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Dichlorodifluoromethane	ND	2.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1-Dichloroethane	ND	1.4	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,3-Dichloropropane	ND	0.90	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
2,2-Dichloropropane	ND	1.3	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1-Dichloropropene	ND	0.90	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Hexachlorobutadiene	ND	2.8	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
2-Hexanone	ND	9.0	50		µg/L	5	7/27/2021 8:45:51 PM	A80126
Isopropylbenzene	4.9	0.91	5.0	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
4-Isopropyltoluene	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
4-Methyl-2-pentanone	ND	4.4	50		µg/L	5	7/27/2021 8:45:51 PM	A80126
Methylene Chloride	ND	2.5	15		µg/L	5	7/27/2021 8:45:51 PM	A80126
n-Butylbenzene	ND	1.3	15		µg/L	5	7/27/2021 8:45:51 PM	A80126
n-Propylbenzene	3.7	0.91	5.0	J	µg/L	5	7/27/2021 8:45:51 PM	A80126
sec-Butylbenzene	ND	0.72	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Styrene	ND	0.68	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
tert-Butylbenzene	ND	1.2	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1,2,2-Tetrachloroethane	ND	1.4	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
Tetrachloroethene (PCE)	ND	1.8	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
trans-1,2-DCE	ND	0.97	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
trans-1,3-Dichloropropene	ND	1.7	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2,3-Trichlorobenzene	ND	1.2	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126

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Qualifiers:

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-9
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 8:40:00 AM
Lab ID: 2107C54-008 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	1.2	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1,1-Trichloroethane	ND	1.5	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,1,2-Trichloroethane	ND	0.99	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Trichloroethene (TCE)	ND	1.0	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Trichlorofluoromethane	ND	0.79	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
1,2,3-Trichloropropane	ND	2.2	10		µg/L	5	7/27/2021 8:45:51 PM	A80126
Vinyl chloride	ND	1.6	5.0		µg/L	5	7/27/2021 8:45:51 PM	A80126
Xylenes, Total	600	1.9	7.5		µg/L	5	7/27/2021 8:45:51 PM	A80126
Surr: 1,2-Dichloroethane-d4	98.6	0	70-130		%Rec	5	7/27/2021 8:45:51 PM	A80126
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	5	7/27/2021 8:45:51 PM	A80126
Surr: Dibromofluoromethane	95.8	0	70-130		%Rec	5	7/27/2021 8:45:51 PM	A80126
Surr: Toluene-d8	93.0	0	70-130		%Rec	5	7/27/2021 8:45:51 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.52			*H	pH units	1	8/3/2021 1:25:35 AM	R80263
SM2320B: ALKALINITY							Analyst: **JRR**	
Bicarbonate (As CaCO3)	1357	50.00	50.00		mg/L Ca	2.5	8/3/2021 6:47:18 PM	R80275
Carbonate (As CaCO3)	68.80	5.000	5.000		mg/L Ca	2.5	8/3/2021 6:47:18 PM	R80275
Total Alkalinity (as CaCO3)	1426	50.00	50.00		mg/L Ca	2.5	8/3/2021 6:47:18 PM	R80275
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	2730	100	100	*D	mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/21/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021
Lab ID: 2107C54-009 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Chloride	390	25	50	*	mg/L	100	7/27/2021 5:56:08 PM	R80124
Sulfate	2000	25	50	*	mg/L	100	7/27/2021 5:56:08 PM	R80124
Nitrate+Nitrite as N	0.59	0.11	1.0	J	mg/L	5	7/26/2021 7:41:33 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.0076	0.0011	0.0020		mg/L	1	7/27/2021 1:37:21 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:37:21 PM	A80106
Calcium	190	0.57	5.0		mg/L	5	7/27/2021 1:38:53 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:37:21 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:37:21 PM	A80106
Sodium	1300	2.7	20		mg/L	20	7/27/2021 2:00:59 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00086	0.00061	0.0050	J	mg/L	5	8/2/2021 12:22:22 PM	C80249
Lead	ND	0.00028	0.0025		mg/L	5	8/2/2021 12:22:22 PM	C80249
Selenium	ND	0.0017	0.0050		mg/L	5	8/2/2021 12:22:22 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.024	0.000069	0.00050		mg/L	1	7/29/2021 1:59:45 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:13:32 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Bis(2-ethylhexyl)phthalate	4.6	4.5	10	J	µg/L	1	7/29/2021 2:05:37 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-DUP-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021
Lab ID: 2107C54-009
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 2:05:37 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 2:05:37 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 2:05:37 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 2:05:37 PM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
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ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/21/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021
Lab ID: 2107C54-009 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 2:05:37 PM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 2:05:37 PM	61610
Surr: 2-Fluorophenol	22.5	0	15-88.8		%Rec	1	7/29/2021 2:05:37 PM	61610
Surr: Phenol-d5	21.1	0	15-71.9		%Rec	1	7/29/2021 2:05:37 PM	61610
Surr: 2,4,6-Tribromophenol	28.8	0	15-97.4		%Rec	1	7/29/2021 2:05:37 PM	61610
Surr: Nitrobenzene-d5	31.8	0	15-117		%Rec	1	7/29/2021 2:05:37 PM	61610
Surr: 2-Fluorobiphenyl	33.6	0	15-100		%Rec	1	7/29/2021 2:05:37 PM	61610
Surr: 4-Terphenyl-d14	103	0	15-120		%Rec	1	7/29/2021 2:05:37 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Toluene	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Naphthalene	ND	0.50	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Acetone	ND	2.5	10		µg/L	1	7/30/2021 6:17:14 PM	R80215
Bromobenzene	ND	0.28	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Bromoform	ND	0.31	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Bromomethane	ND	0.85	3.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
2-Butanone	ND	2.0	10		µg/L	1	7/30/2021 6:17:14 PM	R80215
Carbon disulfide	ND	0.59	10		µg/L	1	7/30/2021 6:17:14 PM	R80215

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Qualifiers:

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-DUP-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021
Lab ID: 2107C54-009
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Chloroethane	ND	0.38	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Chloroform	ND	0.13	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Chloromethane	ND	0.41	3.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Dibromomethane	ND	0.31	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
2-Hexanone	ND	1.8	10		µg/L	1	7/30/2021 6:17:14 PM	R80215
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/30/2021 6:17:14 PM	R80215
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Styrene	ND	0.14	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215

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Qualifiers:

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/21/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021
Lab ID: 2107C54-009 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/30/2021 6:17:14 PM	R80215
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/30/2021 6:17:14 PM	R80215
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	7/30/2021 6:17:14 PM	R80215
Surr: 4-Bromofluorobenzene	98.3	0	70-130		%Rec	1	7/30/2021 6:17:14 PM	R80215
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	7/30/2021 6:17:14 PM	R80215
Surr: Toluene-d8	101	0	70-130		%Rec	1	7/30/2021 6:17:14 PM	R80215
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.11			H	pH units	1	8/3/2021 2:02:11 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	753.4	20.00	20.00		mg/L Ca	1	8/3/2021 2:02:11 AM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/3/2021 2:02:11 AM	R80263
Total Alkalinity (as CaCO3)	753.4	20.00	20.00		mg/L Ca	1	8/3/2021 2:02:11 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	4310	20.0	20.0	*	mg/L	1	7/29/2021 10:22:00 AM	61587

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/22/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021
Lab ID: 2107C54-010 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	200	5.0	10		mg/L	20	7/27/2021 12:19:23 AM	R80092
Sulfate	1100	12	25	*	mg/L	50	7/27/2021 6:09:00 PM	R80124
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 7:54:27 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.029	0.0011	0.0020		mg/L	1	7/27/2021 1:45:39 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 1:45:39 PM	A80106
Calcium	37	0.11	1.0		mg/L	1	7/27/2021 1:45:39 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 1:45:39 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 1:45:39 PM	A80106
Sodium	880	1.4	10		mg/L	10	7/27/2021 2:08:19 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00061	0.0050		mg/L	5	8/2/2021 12:25:06 PM	C80249
Lead	0.000072	0.000057	0.00050	J	mg/L	1	7/26/2021 6:02:52 PM	B80079
Selenium	ND	0.0017	0.0050		mg/L	5	8/2/2021 12:25:06 PM	C80249
EPA 200.8: METALS							Analyst: **ELS**	
Uranium	0.031	0.00034	0.0025	*	mg/L	5	7/29/2021 2:57:37 PM	61643
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:15:56 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Bis(2-ethylhexyl)phthalate	4.5	4.5	10	J	µg/L	1	7/29/2021 2:47:44 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/22/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021
Lab ID: 2107C54-010 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 2:47:44 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 2:47:44 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 2:47:44 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 2:47:44 PM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/22/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021
Lab ID: 2107C54-010 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 2:47:44 PM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 2:47:44 PM	61610
Surr: 2-Fluorophenol	15.2	0	15-88.8		%Rec	1	7/29/2021 2:47:44 PM	61610
Surr: Phenol-d5	13.6	0	15-71.9	S	%Rec	1	7/29/2021 2:47:44 PM	61610
Surr: 2,4,6-Tribromophenol	21.6	0	15-97.4		%Rec	1	7/29/2021 2:47:44 PM	61610
Surr: Nitrobenzene-d5	25.5	0	15-117		%Rec	1	7/29/2021 2:47:44 PM	61610
Surr: 2-Fluorobiphenyl	25.1	0	15-100		%Rec	1	7/29/2021 2:47:44 PM	61610
Surr: 4-Terphenyl-d14	113	0	15-120		%Rec	1	7/29/2021 2:47:44 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.37	0.23	1.0	J	µg/L	1	7/27/2021 9:43:01 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Acetone	4.6	2.5	10	J	µg/L	1	7/27/2021 9:43:01 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
2-Butanone	ND	2.0	10		µg/L	1	7/27/2021 9:43:01 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 9:43:01 PM	A80126

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-DUP-7/22/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021
Lab ID: 2107C54-010
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 9:43:01 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 9:43:01 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-DUP-7/22/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021
Lab ID: 2107C54-010 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 9:43:01 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 9:43:01 PM	A80126
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	7/27/2021 9:43:01 PM	A80126
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	7/27/2021 9:43:01 PM	A80126
Surr: Dibromofluoromethane	99.3	0	70-130		%Rec	1	7/27/2021 9:43:01 PM	A80126
Surr: Toluene-d8	96.5	0	70-130		%Rec	1	7/27/2021 9:43:01 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.44			H	pH units	1	8/3/2021 2:30:18 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	727.6	20.00	20.00		mg/L Ca	1	8/3/2021 2:30:18 AM	R80263
Carbonate (As CaCO3)	12.88	2.000	2.000		mg/L Ca	1	8/3/2021 2:30:18 AM	R80263
Total Alkalinity (as CaCO3)	740.5	20.00	20.00		mg/L Ca	1	8/3/2021 2:30:18 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	2720	20.0	20.0	*	mg/L	1	7/29/2021 2:39:00 PM	61618

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Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
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RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-EB-7/21/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/21/2021 1:30:00 PM
Lab ID: 2107C54-011 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	ND	1.2	2.5		mg/L	5	7/27/2021 12:32:16 AM	R80092
Sulfate	ND	1.2	2.5		mg/L	5	7/27/2021 12:32:16 AM	R80092
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	7/26/2021 8:07:20 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.0011	0.0020		mg/L	1	7/27/2021 12:50:15 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 12:50:15 PM	A80106
Calcium	ND	0.11	1.0		mg/L	1	7/27/2021 12:50:15 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 12:50:15 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 12:50:15 PM	A80106
Sodium	ND	0.14	1.0		mg/L	1	7/27/2021 12:50:15 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00012	0.0010		mg/L	1	8/2/2021 11:36:12 AM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 6:07:36 PM	B80079
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 11:36:12 AM	C80249
EPA 200.8: METALS							Analyst: **bcv**	
Uranium	ND	0.000069	0.00050		mg/L	1	7/27/2021 6:34:29 PM	C80121
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:18:20 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Bis(2-ethylhexyl)phthalate	4.8	4.5	10	J	µg/L	1	7/29/2021 3:29:46 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610

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Qualifiers:

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PQL	Practical Quanitative Limit
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-011
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 3:29:46 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 3:29:46 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 3:29:46 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 3:29:46 PM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
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S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-011
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 3:29:46 PM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 3:29:46 PM	61610
Surr: 2-Fluorophenol	25.6	0	15-88.8		%Rec	1	7/29/2021 3:29:46 PM	61610
Surr: Phenol-d5	21.7	0	15-71.9		%Rec	1	7/29/2021 3:29:46 PM	61610
Surr: 2,4,6-Tribromophenol	30.7	0	15-97.4		%Rec	1	7/29/2021 3:29:46 PM	61610
Surr: Nitrobenzene-d5	33.2	0	15-117		%Rec	1	7/29/2021 3:29:46 PM	61610
Surr: 2-Fluorobiphenyl	31.5	0	15-100		%Rec	1	7/29/2021 3:29:46 PM	61610
Surr: 4-Terphenyl-d14	124	0	15-120	S	%Rec	1	7/29/2021 3:29:46 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.23	0.23	1.0	J	µg/L	1	7/27/2021 10:11:35 PM	A80126
Toluene	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Acetone	9.4	2.5	10	J	µg/L	1	7/27/2021 10:11:35 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
2-Butanone	2.5	2.0	10	J	µg/L	1	7/27/2021 10:11:35 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 10:11:35 PM	A80126

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Qualifiers:

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D	Sample Diluted Due to Matrix
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P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-011
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 10:11:35 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 10:11:35 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/21/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/21/2021 1:30:00 PM
Lab ID: 2107C54-011
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 10:11:35 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 10:11:35 PM	A80126
Surr: 1,2-Dichloroethane-d4	99.2	0	70-130		%Rec	1	7/27/2021 10:11:35 PM	A80126
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	7/27/2021 10:11:35 PM	A80126
Surr: Dibromofluoromethane	99.0	0	70-130		%Rec	1	7/27/2021 10:11:35 PM	A80126
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	7/27/2021 10:11:35 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	6.10			H	pH units	1	8/3/2021 2:59:27 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	ND	20.00	20.00		mg/L Ca	1	8/3/2021 2:59:27 AM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/3/2021 2:59:27 AM	R80263
Total Alkalinity (as CaCO3)	ND	20.00	20.00		mg/L Ca	1	8/3/2021 2:59:27 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	37.0	20.0	20.0		mg/L	1	7/29/2021 2:39:00 PM	61618

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/22/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C54-012
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Chloride	ND	1.2	2.5		mg/L	5	7/27/2021 12:58:00 AM	R80092
Sulfate	1.8	1.2	2.5	J	mg/L	5	7/27/2021 12:58:00 AM	R80092
Nitrate+Nitrite as N	0.18	0.11	1.0	J	mg/L	5	7/26/2021 8:20:13 PM	R80088
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.0011	0.0020		mg/L	1	7/27/2021 12:54:52 PM	A80106
Cadmium	ND	0.0012	0.0020		mg/L	1	7/27/2021 12:54:52 PM	A80106
Calcium	ND	0.11	1.0		mg/L	1	7/27/2021 12:54:52 PM	A80106
Chromium	ND	0.0020	0.0060		mg/L	1	7/27/2021 12:54:52 PM	A80106
Silver	ND	0.0013	0.0050		mg/L	1	7/27/2021 12:54:52 PM	A80106
Sodium	0.33	0.14	1.0	J	mg/L	1	7/27/2021 12:54:52 PM	A80106
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00012	0.0010		mg/L	1	8/2/2021 11:44:20 AM	C80249
Lead	ND	0.000057	0.00050		mg/L	1	7/26/2021 6:12:20 PM	B80079
Selenium	ND	0.00034	0.0010		mg/L	1	8/2/2021 11:44:20 AM	C80249
EPA 200.8: METALS							Analyst: **bcv**	
Uranium	ND	0.000069	0.00050		mg/L	1	7/27/2021 6:39:14 PM	C80121
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	7/28/2021 10:20:45 AM	61593
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Acenaphthylene	ND	0.42	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Aniline	ND	0.50	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Anthracene	ND	0.75	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Azobenzene	ND	0.55	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzoic acid	ND	1.1	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Benzyl alcohol	ND	0.68	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Bis(2-ethylhexyl)phthalate	4.5	4.5	10	J	µg/L	1	7/29/2021 4:11:52 PM	61610
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/22/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C54-012
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	0.56	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4-Chloroaniline	ND	0.53	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2-Chlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Chrysene	ND	0.71	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	7/29/2021 4:11:52 PM	61610
Di-n-octyl phthalate	ND	3.1	20		µg/L	1	7/29/2021 4:11:52 PM	61610
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Dibenzofuran	ND	0.38	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Diethyl phthalate	ND	3.9	10		µg/L	1	7/29/2021 4:11:52 PM	61610
Dimethyl phthalate	ND	2.0	10		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Fluoranthene	ND	3.5	10		µg/L	1	7/29/2021 4:11:52 PM	61610
Fluorene	ND	0.44	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Hexachloroethane	ND	0.45	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Isophorone	ND	0.40	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2-Methylphenol	ND	0.51	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Naphthalene	ND	2.2	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610

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Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
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ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WG-EB-7/22/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 7/22/2021 7:30:00 AM
Lab ID: 2107C54-012 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Nitroaniline	ND	0.31	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
3-Nitroaniline	ND	1.6	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4-Nitroaniline	ND	0.47	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Nitrobenzene	ND	0.51	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2-Nitrophenol	ND	0.47	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
4-Nitrophenol	ND	0.28	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Pentachlorophenol	ND	0.59	20		µg/L	1	7/29/2021 4:11:52 PM	61610
Phenanthrene	ND	0.79	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Phenol	ND	0.33	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Pyrene	ND	1.3	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Pyridine	ND	0.93	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	7/29/2021 4:11:52 PM	61610
Surr: 2-Fluorophenol	27.8	0	15-88.8		%Rec	1	7/29/2021 4:11:52 PM	61610
Surr: Phenol-d5	23.7	0	15-71.9		%Rec	1	7/29/2021 4:11:52 PM	61610
Surr: 2,4,6-Tribromophenol	30.5	0	15-97.4		%Rec	1	7/29/2021 4:11:52 PM	61610
Surr: Nitrobenzene-d5	35.7	0	15-117		%Rec	1	7/29/2021 4:11:52 PM	61610
Surr: 2-Fluorobiphenyl	33.2	0	15-100		%Rec	1	7/29/2021 4:11:52 PM	61610
Surr: 4-Terphenyl-d14	91.4	0	15-120		%Rec	1	7/29/2021 4:11:52 PM	61610
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Toluene	0.21	0.20	1.0	J	µg/L	1	7/27/2021 10:40:09 PM	A80126
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Naphthalene	ND	0.50	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Acetone	11	2.5	10		µg/L	1	7/27/2021 10:40:09 PM	A80126
Bromobenzene	ND	0.28	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Bromoform	ND	0.31	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Bromomethane	ND	0.85	3.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
2-Butanone	2.5	2.0	10	J	µg/L	1	7/27/2021 10:40:09 PM	A80126
Carbon disulfide	ND	0.59	10		µg/L	1	7/27/2021 10:40:09 PM	A80126

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Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/22/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C54-012 **Matrix:** AQUEOUS **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Chlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Chloroethane	ND	0.38	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Chloroform	ND	0.13	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Chloromethane	ND	0.41	3.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Dibromomethane	ND	0.31	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
2-Hexanone	ND	1.8	10		µg/L	1	7/27/2021 10:40:09 PM	A80126
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/27/2021 10:40:09 PM	A80126
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Styrene	ND	0.14	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: WG-EB-7/22/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 7/22/2021 7:30:00 AM
Lab ID: 2107C54-012
Matrix: AQUEOUS
Received Date: 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/27/2021 10:40:09 PM	A80126
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/27/2021 10:40:09 PM	A80126
Surr: 1,2-Dichloroethane-d4	99.1	0	70-130		%Rec	1	7/27/2021 10:40:09 PM	A80126
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	7/27/2021 10:40:09 PM	A80126
Surr: Dibromofluoromethane	97.3	0	70-130		%Rec	1	7/27/2021 10:40:09 PM	A80126
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	7/27/2021 10:40:09 PM	A80126
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	4.52			H	pH units	1	8/3/2021 3:06:30 AM	R80263
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	ND	20.00	20.00		mg/L Ca	1	8/3/2021 3:06:30 AM	R80263
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/3/2021 3:06:30 AM	R80263
Total Alkalinity (as CaCO3)	ND	20.00	20.00		mg/L Ca	1	8/3/2021 3:06:30 AM	R80263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	ND	20.0	20.0		mg/L	1	7/29/2021 2:39:00 PM	61618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** TRIP BLANK
Project: 2021 Wingate Annual GW Sampling **Collection Date:**
Lab ID: 2107C54-013 **Matrix:** TRIP BLANK **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.23	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Toluene	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Ethylbenzene	ND	0.21	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Naphthalene	ND	0.50	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Acetone	ND	2.5	10		µg/L	1	7/30/2021 5:19:39 PM	R80215
Bromobenzene	ND	0.28	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Bromodichloromethane	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Bromoform	ND	0.31	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Bromomethane	ND	0.85	3.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
2-Butanone	ND	2.0	10		µg/L	1	7/30/2021 5:19:39 PM	R80215
Carbon disulfide	ND	0.59	10		µg/L	1	7/30/2021 5:19:39 PM	R80215
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Chlorobenzene	0.61	0.16	1.0	J	µg/L	1	7/30/2021 5:19:39 PM	R80215
Chloroethane	ND	0.38	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Chloroform	3.6	0.13	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Chloromethane	ND	0.41	3.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Dibromochloromethane	ND	0.28	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Dibromomethane	ND	0.31	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2107C54**
Date Reported: **8/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** TRIP BLANK
Project: 2021 Wingate Annual GW Sampling **Collection Date:**
Lab ID: 2107C54-013 **Matrix:** TRIP BLANK **Received Date:** 7/23/2021 4:57:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
2-Hexanone	ND	1.8	10		µg/L	1	7/30/2021 5:19:39 PM	R80215
Isopropylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	7/30/2021 5:19:39 PM	R80215
Methylene Chloride	ND	0.50	3.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
n-Propylbenzene	ND	0.18	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Styrene	ND	0.14	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Vinyl chloride	ND	0.32	1.0		µg/L	1	7/30/2021 5:19:39 PM	R80215
Xylenes, Total	ND	0.37	1.5		µg/L	1	7/30/2021 5:19:39 PM	R80215
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	7/30/2021 5:19:39 PM	R80215
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	7/30/2021 5:19:39 PM	R80215
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	7/30/2021 5:19:39 PM	R80215
Surr: Toluene-d8	101	0	70-130		%Rec	1	7/30/2021 5:19:39 PM	R80215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A80106**	RunNo: **80106**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2819732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A80106**	RunNo: **80106**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2819733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0059	0.0060	0.006000	0	98.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.8	50	150			J
Sodium	0.51	1.0	0.5000	0	101	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A80106**	RunNo: **80106**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2819734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	49	1.0	50.00	0	98.0	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Silver	0.099	0.0050	0.1000	0	99.3	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Sample ID: **2107C54-011EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WG-EB-7/21/2021**	Batch ID: **A80106**	RunNo: **80106**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2819760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Calcium	51	1.0	50.00	0	102	70	130			
Chromium	0.49	0.0060	0.5000	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **2107C54-011EMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WG-EB-7/21/2021** Batch ID: **A80106** RunNo: **80106**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2819760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.1	70	130			
Sodium	51	1.0	50.00	0	101	70	130			

Sample ID: **2107C54-011EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WG-EB-7/21/2021** Batch ID: **A80106** RunNo: **80106**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2819761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	70	130	0.729	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.897	20	
Calcium	50	1.0	50.00	0	100	70	130	1.89	20	
Chromium	0.50	0.0060	0.5000	0	100	70	130	1.50	20	
Silver	0.10	0.0050	0.1000	0	101	70	130	2.82	20	
Sodium	51	1.0	50.00	0	102	70	130	1.14	20	

Sample ID: **2107C54-012EMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WG-EB-7/22/2021** Batch ID: **A80106** RunNo: **80106**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2819763** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.3	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.7	70	130			
Calcium	49	1.0	50.00	0	97.1	70	130			
Chromium	0.49	0.0060	0.5000	0	97.0	70	130			
Silver	0.097	0.0050	0.1000	0	96.7	70	130			
Sodium	49	1.0	50.00	0.3269	98.1	70	130			

Sample ID: **2107C54-012EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WG-EB-7/22/2021** Batch ID: **A80106** RunNo: **80106**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2819767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	70	130	2.80	20	
Cadmium	0.51	0.0020	0.5000	0	103	70	130	2.95	20	
Calcium	52	1.0	50.00	0	103	70	130	6.34	20	
Chromium	0.50	0.0060	0.5000	0	99.4	70	130	2.45	20	
Silver	0.099	0.0050	0.1000	0	98.9	70	130	2.29	20	
Sodium	50	1.0	50.00	0.3269	99.1	70	130	1.05	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C80121**	RunNo: **80121**							
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820681**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C80121**	RunNo: **80121**							
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820682**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C80121**	RunNo: **80121**							
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820683**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	95.0	85	115			

Sample ID: **MB-61643**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **61643**	RunNo: **80189**							
Prep Date: **7/28/2021**	Analysis Date: **7/29/2021**	SeqNo: **2823577**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-61643**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **61643**	RunNo: **80189**							
Prep Date: **7/28/2021**	Analysis Date: **7/29/2021**	SeqNo: **2823579**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **MSLCS-61643**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **61643**	RunNo: **80189**							
Prep Date: **7/28/2021**	Analysis Date: **7/29/2021**	SeqNo: **2823581**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	107	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **B80249**	RunNo: **80249**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827380**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **B80249**	RunNo: **80249**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827381**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00082	0.0010	0.001000	0	82.0	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **B80249**	RunNo: **80249**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827382**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B80079** RunNo: **80079**
Prep Date: Analysis Date: **7/26/2021** SeqNo: **2818139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								

Sample ID: **LCSLL** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B80079** RunNo: **80079**
Prep Date: Analysis Date: **7/26/2021** SeqNo: **2818140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00055	0.00050	0.0005000	0	110	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B80079** RunNo: **80079**
Prep Date: Analysis Date: **7/26/2021** SeqNo: **2818141** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	93.2	85	115			

Sample ID: **2107C54-012EMSLL** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **WG-EB-7/22/2021** Batch ID: **B80079** RunNo: **80079**
Prep Date: Analysis Date: **7/26/2021** SeqNo: **2819264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	98.4	70	130			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B80249** RunNo: **80249**
Prep Date: Analysis Date: **8/2/2021** SeqNo: **2826653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B80249** RunNo: **80249**
Prep Date: Analysis Date: **8/2/2021** SeqNo: **2826654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00082	0.0010	0.001000	0	82.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**

11-Aug-21

Client: Marathon

Project: 2021 Wingate Annual GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B80249**	RunNo: **80249**
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2826655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C80249**	RunNo: **80249**
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2826656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C80249**	RunNo: **80249**
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2826657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	107	50	150			
Lead	0.00053	0.00050	0.0005000	0	107	50	150			
Selenium	0.0011	0.0010	0.001000	0	114	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C80249**	RunNo: **80249**
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2826658** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.9	85	115			
Lead	0.012	0.00050	0.01250	0	98.4	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID: **2107C54-011EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **WG-EB-7/21/2021**	Batch ID: **C80249**	RunNo: **80249**
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2826690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.0	70	130			
Selenium	0.026	0.0010	0.02500	0	105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **2107C54-011EMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **WG-EB-7/21/2021** Batch ID: **C80249** RunNo: **80249**
Prep Date: Analysis Date: **8/2/2021** SeqNo: **2826691** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.2	70	130	0.143	20	
Selenium	0.026	0.0010	0.02500	0	102	70	130	2.10	20	

Sample ID: **2107C54-012EMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **WG-EB-7/22/2021** Batch ID: **C80249** RunNo: **80249**
Prep Date: Analysis Date: **8/2/2021** SeqNo: **2826693** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	70	130			
Selenium	0.026	0.0010	0.02500	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB-61593**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **PBW**	Batch ID: **61593**	RunNo: **80135**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2821337**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LLLCS-61593**	SampType: **LCSLL**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **BatchQC**	Batch ID: **61593**	RunNo: **80135**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2821338**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00015	0.00020	0.0001500	0	97.6	50	150			J

Sample ID: **LCS-61593**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **LCSW**	Batch ID: **61593**	RunNo: **80135**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2821339**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R80088**	RunNo: **80088**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2818985**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R80088**	RunNo: **80088**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2818988**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R80092**	RunNo: **80092**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2819138**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R80092**	RunNo: **80092**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2819139**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Sulfate	9.5	0.50	10.00	0	95.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.1	90	110			

Sample ID: **2107C54-007CMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **WMW-8**	Batch ID: **R80092**	RunNo: **80092**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2819165**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	58	2.5	25.00	32.55	100	84.2	117			

Sample ID: **2107C54-007CMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **WMW-8**	Batch ID: **R80092**	RunNo: **80092**							
Prep Date:	Analysis Date: **7/26/2021**	SeqNo: **2819166**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	58	2.5	25.00	32.55	102	84.2	117	0.667	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R80124**	RunNo: **80124**							
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820902**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R80124**	RunNo: **80124**							
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820903**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.3	90	110			
Sulfate	10	0.50	10.00	0	99.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A80126**	RunNo: **80126**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820958** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	98.4	70	130			
Chlorobenzene	20	1.0	20.00	0	98.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A80126**	RunNo: **80126**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A80126** RunNo: **80126**
Prep Date: Analysis Date: **7/27/2021** SeqNo: **2820960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A80126**	RunNo: **80126**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R80215**	RunNo: **80215**
Prep Date:	Analysis Date: **7/30/2021**	SeqNo: **2824930** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	22	1.0	20.00	0	109	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80215**	RunNo: **80215**
Prep Date:	Analysis Date: **7/30/2021**	SeqNo: **2824931** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80215**	RunNo: **80215**
Prep Date:	Analysis Date: **7/30/2021**	SeqNo: **2824931** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R80215**	RunNo: **80215**							
Prep Date:	Analysis Date: **7/30/2021**	SeqNo: **2824931**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-61610** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **61610** RunNo: **80191**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2823714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	5.0								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	4.6	10								J
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
3,3´-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-61610** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **61610** RunNo: **80191**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2823714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	10								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	5.0								
Pentachlorophenol	ND	20								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
Surr: 2-Fluorophenol	140		200.0		68.7	15	88.8			
Surr: Phenol-d5	110		200.0		52.7	15	71.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.3	15	97.4			
Surr: Nitrobenzene-d5	80		100.0		80.3	15	117			
Surr: 2-Fluorobiphenyl	79		100.0		78.6	15	100			
Surr: 4-Terphenyl-d14	120		100.0		124	15	120			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **lcs-61610** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **61610** RunNo: **80191**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2823715** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	5.0	100.0	0	71.9	28	101			
4-Chloro-3-methylphenol	140	5.0	200.0	0	70.5	28.3	103			
2-Chlorophenol	130	5.0	200.0	0	65.4	29.3	105			
1,4-Dichlorobenzene	59	5.0	100.0	0	59.1	15	87.6			
2,4-Dinitrotoluene	64	5.0	100.0	0	64.4	23.6	90.9			
N-Nitrosodi-n-propylamine	70	5.0	100.0	0	69.8	23.1	94.6			
4-Nitrophenol	92	5.0	200.0	0	46.0	15	77			
Pentachlorophenol	130	20	200.0	0	62.7	21	111			
Phenol	81	5.0	200.0	0	40.5	16.8	70.5			
Pyrene	97	5.0	100.0	0	97.4	30.5	129			
1,2,4-Trichlorobenzene	62	5.0	100.0	0	61.8	15	88.2			
Surr: 2-Fluorophenol	98		200.0		49.1	15	88.8			
Surr: Phenol-d5	81		200.0		40.7	15	71.9			
Surr: 2,4,6-Tribromophenol	140		200.0		70.4	15	97.4			
Surr: Nitrobenzene-d5	67		100.0		66.9	15	117			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	15	100			
Surr: 4-Terphenyl-d14	110		100.0		113	15	120			

Sample ID: **lcsd-61610** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **61610** RunNo: **80191**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2823717** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	5.0	100.0	0	72.6	28	101	0.949	41.2	
4-Chloro-3-methylphenol	130	5.0	200.0	0	65.8	28.3	103	6.80	44.7	
2-Chlorophenol	130	5.0	200.0	0	67.0	29.3	105	2.40	35.6	
1,4-Dichlorobenzene	64	5.0	100.0	0	64.0	15	87.6	8.02	30.4	
2,4-Dinitrotoluene	63	5.0	100.0	0	63.4	23.6	90.9	1.55	53.1	
N-Nitrosodi-n-propylamine	72	5.0	100.0	0	72.1	23.1	94.6	3.32	31.1	
4-Nitrophenol	52	5.0	200.0	0	25.9	15	77	55.8	52.4	R
Pentachlorophenol	75	20	200.0	0	37.6	21	111	50.0	71.6	
Phenol	86	5.0	200.0	0	42.8	16.8	70.5	5.41	37.2	
Pyrene	100	5.0	100.0	0	100	30.5	129	3.06	51.3	
1,2,4-Trichlorobenzene	63	5.0	100.0	0	62.8	15	88.2	1.71	31.8	
Surr: 2-Fluorophenol	98		200.0		48.9	15	88.8	0	0	
Surr: Phenol-d5	87		200.0		43.5	15	71.9	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		57.2	15	97.4	0	0	
Surr: Nitrobenzene-d5	67		100.0		66.7	15	117	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		70.2	15	100	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **lcsd-61610**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSS02**	Batch ID: **61610**	RunNo: **80191**							
Prep Date: **7/28/2021**	Analysis Date: **7/29/2021**	SeqNo: **2823717**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	130		100.0		126	15	120	0	0	S

Sample ID: **mb-61579**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **61579**	RunNo: **80233**							
Prep Date: **7/27/2021**	Analysis Date: **7/30/2021**	SeqNo: **2825908**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	5.0								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	6.2	10								J
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	6.9	10								J
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-61579** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **61579** RunNo: **80233**
Prep Date: **7/27/2021** Analysis Date: **7/30/2021** SeqNo: **2825908** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	10								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	5.0								
Pentachlorophenol	ND	20								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-61579**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **61579**	RunNo: **80233**							
Prep Date: **7/27/2021**	Analysis Date: **7/30/2021**	SeqNo: **2825908**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.0	15	88.8			
Surr: Phenol-d5	92		200.0		45.9	15	71.9			
Surr: 2,4,6-Tribromophenol	140		200.0		71.1	15	97.4			
Surr: Nitrobenzene-d5	70		100.0		70.2	15	117			
Surr: 2-Fluorobiphenyl	62		100.0		61.5	15	100			
Surr: 4-Terphenyl-d14	83		100.0		82.5	15	120			

Sample ID: **lcs-61579**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSW**	Batch ID: **61579**	RunNo: **80233**							
Prep Date: **7/27/2021**	Analysis Date: **7/30/2021**	SeqNo: **2825911**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	64	5.0	100.0	0	63.6	28	101			
4-Chloro-3-methylphenol	130	5.0	200.0	0	64.8	28.3	103			
2-Chlorophenol	120	5.0	200.0	0	60.2	29.3	105			
1,4-Dichlorobenzene	54	5.0	100.0	0	54.3	15	87.6			
2,4-Dinitrotoluene	66	5.0	100.0	0	65.7	23.6	90.9			
N-Nitrosodi-n-propylamine	63	5.0	100.0	0	62.9	23.1	94.6			
4-Nitrophenol	91	5.0	200.0	0	45.7	15	77			
Pentachlorophenol	110	20	200.0	0	52.7	21	111			
Phenol	75	5.0	200.0	0	37.4	16.8	70.5			
Pyrene	100	5.0	100.0	0	100	30.5	129			
1,2,4-Trichlorobenzene	55	5.0	100.0	0	55.1	15	88.2			
Surr: 2-Fluorophenol	92		200.0		46.0	15	88.8			
Surr: Phenol-d5	74		200.0		37.0	15	71.9			
Surr: 2,4,6-Tribromophenol	150		200.0		75.1	15	97.4			
Surr: Nitrobenzene-d5	61		100.0		61.1	15	117			
Surr: 2-Fluorobiphenyl	55		100.0		55.0	15	100			
Surr: 4-Terphenyl-d14	94		100.0		93.6	15	120			

Sample ID: **lcsd-61579**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSS02**	Batch ID: **61579**	RunNo: **80233**							
Prep Date: **7/27/2021**	Analysis Date: **7/30/2021**	SeqNo: **2825914**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	5.0	100.0	0	68.2	28	101	7.01	41.2	
4-Chloro-3-methylphenol	120	5.0	200.0	0	61.8	28.3	103	4.62	44.7	
2-Chlorophenol	120	5.0	200.0	0	58.7	29.3	105	2.50	35.6	
1,4-Dichlorobenzene	54	5.0	100.0	0	53.9	15	87.6	0.760	30.4	
2,4-Dinitrotoluene	73	5.0	100.0	0	73.1	23.6	90.9	10.6	53.1	

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **lcsd-61579** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **61579** RunNo: **80233**
Prep Date: **7/27/2021** Analysis Date: **7/30/2021** SeqNo: **2825914** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	65	5.0	100.0	0	65.4	23.1	94.6	3.87	31.1	
4-Nitrophenol	120	5.0	200.0	0	62.0	15	77	30.3	52.4	
Pentachlorophenol	140	20	200.0	0	71.9	21	111	30.9	71.6	
Phenol	73	5.0	200.0	0	36.3	16.8	70.5	2.97	37.2	
Pyrene	99	5.0	100.0	0	99.2	30.5	129	0.996	51.3	
1,2,4-Trichlorobenzene	52	5.0	100.0	0	51.7	15	88.2	6.41	31.8	
Surr: 2-Fluorophenol	91		200.0		45.5	15	88.8	0	0	
Surr: Phenol-d5	77		200.0		38.3	15	71.9	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		74.0	15	97.4	0	0	
Surr: Nitrobenzene-d5	62		100.0		62.0	15	117	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		60.2	15	100	0	0	
Surr: 4-Terphenyl-d14	89		100.0		88.9	15	120	0	0	

Qualifiers:

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J	Analyte detected below quantitation limits
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **2107C54-005C dup** SampType: **dup** TestCode: **SM4500-H+B / 9040C: pH**
Client ID: **WMW-5** Batch ID: **R80263** RunNo: **80263**
Prep Date: Analysis Date: **8/3/2021** SeqNo: **2827498** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.03									H

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-1 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827423**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827424**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.20	20.00	80.00	0	97.7	90	110			

Sample ID: **mb-2 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827446**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-2 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827447**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.80	20.00	80.00	0	98.5	90	110			

Sample ID: **mb-3 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827469**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-3 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/2/2021**	SeqNo: **2827470**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.00	20.00	80.00	0	98.8	90	110			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **2107C54-005C dup**	SampType: **dup**	TestCode: **SM2320B: Alkalinity**							
Client ID: **WMW-5**	Batch ID: **R80263**	RunNo: **80263**							
Prep Date:	Analysis Date: **8/3/2021**	SeqNo: **2827474**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	754.6	20.00						0.106	20	

Sample ID: **mb-1 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80275**	RunNo: **80275**							
Prep Date:	Analysis Date: **8/3/2021**	SeqNo: **2828556**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80275**	RunNo: **80275**							
Prep Date:	Analysis Date: **8/3/2021**	SeqNo: **2828557**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.12	20.00	80.00	0	98.9	90	110			

Sample ID: **mb-2 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80275**	RunNo: **80275**							
Prep Date:	Analysis Date: **8/3/2021**	SeqNo: **2828586**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-2 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80275**	RunNo: **80275**							
Prep Date:	Analysis Date: **8/3/2021**	SeqNo: **2828587**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.60	20.00	80.00	0	99.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107C54**
11-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB-61587** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **61587** RunNo: **80162**
Prep Date: **7/27/2021** Analysis Date: **7/29/2021** SeqNo: **2822613** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-61587** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **61587** RunNo: **80162**
Prep Date: **7/27/2021** Analysis Date: **7/29/2021** SeqNo: **2822614** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Sample ID: **2107C54-009CDUP** SampType: **DUP** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **WG-DUP-7/21/2021** Batch ID: **61587** RunNo: **80162**
Prep Date: **7/27/2021** Analysis Date: **7/29/2021** SeqNo: **2822634** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	4270	20.0						1.05	10	*

Sample ID: **MB-61618** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **61618** RunNo: **80173**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2822956** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-61618** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **61618** RunNo: **80173**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2822957** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Sample ID: **2107C54-007CDUP** SampType: **DUP** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **WMW-8** Batch ID: **61618** RunNo: **80173**
Prep Date: **7/28/2021** Analysis Date: **7/29/2021** SeqNo: **2822967** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	864	20.0						1.27	10	*

Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon** Work Order Number: **2107C54** RcptNo: 1

Received By: **Desiree Dominguez** 7/23/2021 4:57:00 PM DD

Completed By: **Desiree Dominguez** 7/26/2021 8:26:31 AM DD

Reviewed By: KPH 7/26/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ JR 7/26/21
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☑ JR 7/26/21 NA ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 36 (<2 or >12 unless noted)
Adjusted? yes
Checked by: JR 7/26/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: 1.0ml of HNO3 was added to sample 0021 for pH<2. 0.5ml of HNO3 was added to sample 0031, 0091 for pH<2. 0.4ml of HNO3 was added to samples 002E 008E for pH<2. JR 7/26/21. ~~to~~ JR 7/26/21 VOAs received with headspace JR 7/26/21.

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Not Present			

Chain of Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Marathon Petroleum Company	☐ Standard ☐ Rush
Mailing Address: 92 Giant Crossing Rd. Jamestown, NM 87347	Project Name: 2021 Wingate Annual GW Sampling
Phone #: 808-640-1823	Project #: 697-080-001
Email or Fax#: bmcloughlin@trihydro.com	Project Manager: Brian McLoughlin
QA/QC Package: **Standard** ☐ Level 4 (Full Validation)	Sampler:
Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other	On Ice: ☑ Yes ☐ No
EDD (Type)	# of Coolers: 1
	Cooler Temp(including CF): 4.9-0.0=4.9°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2107C54	SW8260B	SW8270C	SW6020 (As,Ba,Cd,Ca,Cr,Pb,Se,Ag,N	SW7470	SM2320B	M2540C	M4500 H+B	E300	SW6020
7/21	13:30	water	WMW-1R			-001									
7/21	15:00	water	WMW-2			-002									
7/21	12:40	water	WMW-3			-003									
7/22	8:30	water	WMW-4			-004									
7/21	14:10	water	WMW-5			-005									
7/22	9:30	water	WMW-6 (WMW-7)			-006									
7/21	11:55	water	WMW-8			-007									
7/21	8:40	water	WMW-9			-008									
7/21	—	water	WG-DUP-7/21/2021			-009									
7/22	—	water	WG-DUP-7/22/2021			-010									
7/21	13:30	water	WG-EB-7/21/2021		7/26/21	-011									
7/22	7:30	water	WG-EB-7/22/2021			-012									

Date	Time	Relinquished by:	Received by:	Via:	Date Time
7/23	14:00		Temp Blank	Courier	7/23/21 16:57

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Andy Freeman

From: Brian McLoughlin <bmcloughlin@trihydro.com>
Sent: Thursday, April 22, 2021 3:23 PM
To: Andy Freeman
Subject: RE: GW sampling for next 3 quarters

Wingate :

10 samples + a dup. All the same

8260B
8270
3010/6010 – metals – Dissolved
- Arsenic
- Barium
- Cadmium
- Calcium
- Chromium
- Lead
- Selenium
- Silver
- Sodium

7470 – Mercury – total
SM2320B – Alkalinity, Total as CaCO3
SM2540C – Total dissolved solids
EPA 9040 pH
EPA 300.0 – Chloride, Sulfate, Nitrogen, Nitrate
EPA Method 200.8 – Total Uranium

Thanks
Brian

From: Brian McLoughlin
Sent: Thursday, April 22, 2021 1:55 PM
To: Andy Freeman <andy@hallenvironmental.com>
Subject: GW sampling for next 3 quarters

Hello,

See attached.
2nd and 4th quarter are the same.

I still need to figure out Wingate, will follow soon

Thanks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

August 26, 2021

Brian McLoughlin

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2021 Wingate Annual GW Sampling OrderNo.: 2108A81

Dear Brian McLoughlin:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/19/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-6
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 8/19/2021 10:15:00 AM
Lab ID: 2108A81-001 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **JMT**	
Chloride	60	5.0	10		mg/L	20	8/19/2021 10:10:24 PM	R80671
Nitrogen, Nitrite (As N)	ND	0.015	0.10		mg/L	1	8/19/2021 9:57:32 PM	R80671
Nitrogen, Nitrate (As N)	ND	0.020	0.10		mg/L	1	8/19/2021 9:57:32 PM	R80671
Sulfate	260	5.0	10	*	mg/L	20	8/19/2021 10:10:24 PM	R80671
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.031	0.0011	0.0020		mg/L	1	8/24/2021 9:44:08 AM	A80750
Cadmium	ND	0.0012	0.0020		mg/L	1	8/24/2021 9:44:08 AM	A80750
Calcium	34	0.11	1.0		mg/L	1	8/24/2021 9:44:08 AM	A80750
Chromium	ND	0.0020	0.0060		mg/L	1	8/24/2021 9:44:08 AM	A80750
Silver	ND	0.0013	0.0050		mg/L	1	8/24/2021 9:44:08 AM	A80750
Sodium	310	0.69	5.0		mg/L	5	8/24/2021 9:45:44 AM	A80750
EPA 200.8: DISSOLVED METALS							Analyst: **bcv**	
Arsenic	0.00056	0.00012	0.0010	J	mg/L	1	8/20/2021 1:14:58 PM	B80703
Lead	ND	0.000057	0.00050		mg/L	1	8/20/2021 1:14:58 PM	B80703
Selenium	ND	0.00034	0.0010		mg/L	1	8/20/2021 1:14:58 PM	B80703
EPA 200.8: METALS							Analyst: **bcv**	
Uranium	0.0089	0.000069	0.00050		mg/L	1	8/24/2021 11:26:04 AM	62129
EPA METHOD 245.1: MERCURY							Analyst: **ags**	
Mercury	ND	0.00012	0.00020		mg/L	1	8/24/2021 11:33:31 AM	62116
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	0.50	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Acenaphthylene	ND	0.42	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Aniline	ND	0.50	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Anthracene	ND	0.75	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Azobenzene	ND	0.55	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benz(a)anthracene	ND	0.73	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzo(a)pyrene	ND	0.87	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzo(b)fluoranthene	ND	0.95	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzo(g,h,i)perylene	ND	1.1	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzo(k)fluoranthene	ND	0.82	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzoic acid	ND	1.1	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Benzyl alcohol	ND	0.68	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Bis(2-chloroethoxy)methane	ND	0.41	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Bis(2-chloroethyl)ether	ND	0.63	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Bis(2-chloroisopropyl)ether	ND	0.54	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Bis(2-ethylhexyl)phthalate	6.0	4.5	10	J	µg/L	1	8/24/2021 4:53:34 PM	62113
4-Bromophenyl phenyl ether	ND	0.77	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-6
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 8/19/2021 10:15:00 AM
Lab ID: 2108A81-001 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	0.74	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Carbazole	ND	0.56	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4-Chloro-3-methylphenol	ND	0.41	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4-Chloroaniline	ND	0.53	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Chloronaphthalene	ND	0.59	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Chlorophenol	ND	0.62	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4-Chlorophenyl phenyl ether	ND	0.57	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Chrysene	ND	0.71	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Di-n-butyl phthalate	ND	6.5	10		µg/L	1	8/24/2021 4:53:34 PM	62113
Di-n-octyl phthalate	5.1	3.1	20	J	µg/L	1	8/24/2021 4:53:34 PM	62113
Dibenz(a,h)anthracene	ND	0.83	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Dibenzofuran	ND	0.38	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
1,2-Dichlorobenzene	ND	0.75	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
1,3-Dichlorobenzene	ND	0.64	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
1,4-Dichlorobenzene	ND	0.70	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
3,3´-Dichlorobenzidine	ND	0.51	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Diethyl phthalate	ND	3.9	10		µg/L	1	8/24/2021 4:53:34 PM	62113
Dimethyl phthalate	ND	2.0	10		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4-Dichlorophenol	ND	0.58	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4-Dimethylphenol	ND	0.97	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4,6-Dinitro-2-methylphenol	ND	0.53	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4-Dinitrophenol	ND	0.50	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4-Dinitrotoluene	ND	0.62	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,6-Dinitrotoluene	ND	0.58	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Fluoranthene	ND	3.5	10		µg/L	1	8/24/2021 4:53:34 PM	62113
Fluorene	ND	0.44	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Hexachlorobenzene	ND	0.66	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Hexachlorobutadiene	ND	0.82	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Hexachlorocyclopentadiene	ND	0.65	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Hexachloroethane	ND	0.45	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Indeno(1,2,3-cd)pyrene	ND	0.92	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Isophorone	ND	0.40	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
1-Methylnaphthalene	ND	0.60	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Methylnaphthalene	ND	0.41	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Methylphenol	ND	0.51	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
3+4-Methylphenol	ND	0.45	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
N-Nitrosodi-n-propylamine	ND	0.48	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
N-Nitrosodimethylamine	ND	0.36	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
N-Nitrosodiphenylamine	ND	1.0	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-6
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 8/19/2021 10:15:00 AM
Lab ID: 2108A81-001 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	2.2	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Nitroaniline	ND	0.31	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
3-Nitroaniline	ND	1.6	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4-Nitroaniline	ND	0.47	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Nitrobenzene	ND	0.51	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2-Nitrophenol	ND	0.47	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
4-Nitrophenol	ND	0.28	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Pentachlorophenol	ND	0.59	20		µg/L	1	8/24/2021 4:53:34 PM	62113
Phenanthrene	ND	0.79	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Phenol	ND	0.33	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Pyrene	ND	1.3	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Pyridine	ND	0.93	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
1,2,4-Trichlorobenzene	ND	0.58	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4,5-Trichlorophenol	ND	0.62	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
2,4,6-Trichlorophenol	ND	0.43	5.0		µg/L	1	8/24/2021 4:53:34 PM	62113
Surr: 2-Fluorophenol	34.1	0	15-88.8		%Rec	1	8/24/2021 4:53:34 PM	62113
Surr: Phenol-d5	28.3	0	15-71.9		%Rec	1	8/24/2021 4:53:34 PM	62113
Surr: 2,4,6-Tribromophenol	77.7	0	15-97.4		%Rec	1	8/24/2021 4:53:34 PM	62113
Surr: Nitrobenzene-d5	44.4	0	15-117		%Rec	1	8/24/2021 4:53:34 PM	62113
Surr: 2-Fluorobiphenyl	46.1	0	15-100		%Rec	1	8/24/2021 4:53:34 PM	62113
Surr: 4-Terphenyl-d14	97.9	0	15-120		%Rec	1	8/24/2021 4:53:34 PM	62113
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.23	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Toluene	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Naphthalene	ND	0.50	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Acetone	ND	2.5	10		µg/L	1	8/20/2021 5:32:00 PM	R80688
Bromobenzene	ND	0.28	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Bromoform	ND	0.31	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Bromomethane	ND	0.85	3.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
2-Butanone	ND	2.0	10		µg/L	1	8/20/2021 5:32:00 PM	R80688

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Lab ID: 2108A81-001 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Carbon disulfide	ND	0.59	10		µg/L	1	8/20/2021 5:32:00 PM	R80688
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Chloroethane	ND	0.38	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Chloroform	ND	0.13	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Chloromethane	ND	0.41	3.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Dibromomethane	ND	0.31	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
2-Hexanone	ND	1.8	10		µg/L	1	8/20/2021 5:32:00 PM	R80688
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/20/2021 5:32:00 PM	R80688
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Styrene	ND	0.14	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** WMW-6
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 8/19/2021 10:15:00 AM
Lab ID: 2108A81-001 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/20/2021 5:32:00 PM	R80688
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/20/2021 5:32:00 PM	R80688
Surr: 1,2-Dichloroethane-d4	85.9	0	70-130		%Rec	1	8/20/2021 5:32:00 PM	R80688
Surr: 4-Bromofluorobenzene	97.0	0	70-130		%Rec	1	8/20/2021 5:32:00 PM	R80688
Surr: Dibromofluoromethane	84.3	0	70-130		%Rec	1	8/20/2021 5:32:00 PM	R80688
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	8/20/2021 5:32:00 PM	R80688
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.12			H	pH units	1	8/23/2021 4:01:02 PM	R80740
SM2320B: ALKALINITY							Analyst: **CAS**	
Bicarbonate (As CaCO3)	454.0	20.00	20.00		mg/L Ca	1	8/23/2021 4:01:02 PM	R80740
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	8/23/2021 4:01:02 PM	R80740
Total Alkalinity (as CaCO3)	454.0	20.00	20.00		mg/L Ca	1	8/23/2021 4:01:02 PM	R80740
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	968	40.0	40.0	*D	mg/L	1	8/24/2021 7:04:00 PM	62125

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon **Client Sample ID:** FB-8/19/2021
Project: 2021 Wingate Annual GW Sampling **Collection Date:** 8/19/2021 10:15:00 AM
Lab ID: 2108A81-002 **Matrix:** AQUEOUS **Received Date:** 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.23	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Toluene	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Naphthalene	ND	0.50	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Acetone	ND	2.5	10		µg/L	1	8/20/2021 5:56:00 PM	R80688
Bromobenzene	ND	0.28	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Bromoform	ND	0.31	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Bromomethane	ND	0.85	3.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
2-Butanone	ND	2.0	10		µg/L	1	8/20/2021 5:56:00 PM	R80688
Carbon disulfide	ND	0.59	10		µg/L	1	8/20/2021 5:56:00 PM	R80688
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Chloroethane	ND	0.38	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Chloroform	ND	0.13	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Chloromethane	ND	0.41	3.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Dibromomethane	ND	0.31	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2108A81**
Date Reported: **8/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: FB-8/19/2021
Project: 2021 Wingate Annual GW Sampling
Collection Date: 8/19/2021 10:15:00 AM
Lab ID: 2108A81-002
Matrix: AQUEOUS
Received Date: 8/19/2021 4:42:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
2-Hexanone	ND	1.8	10		µg/L	1	8/20/2021 5:56:00 PM	R80688
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/20/2021 5:56:00 PM	R80688
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Styrene	ND	0.14	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/20/2021 5:56:00 PM	R80688
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/20/2021 5:56:00 PM	R80688
Surr: 1,2-Dichloroethane-d4	84.2	0	70-130		%Rec	1	8/20/2021 5:56:00 PM	R80688
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	1	8/20/2021 5:56:00 PM	R80688
Surr: Dibromofluoromethane	85.2	0	70-130		%Rec	1	8/20/2021 5:56:00 PM	R80688
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	8/20/2021 5:56:00 PM	R80688

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A80750**	RunNo: **80750**
Prep Date:	Analysis Date: **8/24/2021**	SeqNo: **2848970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A80750**	RunNo: **80750**
Prep Date:	Analysis Date: **8/24/2021**	SeqNo: **2848971** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	119	50	150			
Cadmium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Calcium	0.50	1.0	0.5000	0	99.8	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.7	50	150			J
Silver	0.0042	0.0050	0.005000	0	84.6	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A80750**	RunNo: **80750**
Prep Date:	Analysis Date: **8/24/2021**	SeqNo: **2848972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Calcium	48	1.0	50.00	0	96.2	85	115			
Chromium	0.49	0.0060	0.5000	0	98.5	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Sodium	48	1.0	50.00	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB-62129** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **62129** RunNo: **80734**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-62129** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **62129** RunNo: **80734**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849057** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS-62129** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **62129** RunNo: **80734**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B80703**	RunNo: **80703**
Prep Date:	Analysis Date: **8/20/2021**	SeqNo: **2847143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B80703**	RunNo: **80703**
Prep Date:	Analysis Date: **8/20/2021**	SeqNo: **2847144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.2	50	150			J
Lead	0.00053	0.00050	0.0005000	0	105	50	150			
Selenium	0.00088	0.0010	0.001000	0	88.1	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B80703**	RunNo: **80703**
Prep Date:	Analysis Date: **8/20/2021**	SeqNo: **2847146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.026	0.0010	0.02500	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB-62116** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **62116** RunNo: **80759**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LLLCS-62116** SampType: **LCSLL** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **62116** RunNo: **80759**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849250** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00011	0.00020	0.0001500	0	73.0	50	150			J

Sample ID: **LCS-62116** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **62116** RunNo: **80759**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849251** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R80671** RunNo: **80671**
Prep Date: Analysis Date: **8/19/2021** SeqNo: **2845820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R80671** RunNo: **80671**
Prep Date: Analysis Date: **8/19/2021** SeqNo: **2845821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.9	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.9	90	110			
Sulfate	9.7	0.50	10.00	0	97.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **100ng 8260 lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R80688** RunNo: **80688**
Prep Date: Analysis Date: **8/20/2021** SeqNo: **2846644** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.6	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	98.4	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	83.9	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.6	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.4	70	130			
Surr: Toluene-d8	9.9		10.00		99.2	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R80688** RunNo: **80688**
Prep Date: Analysis Date: **8/20/2021** SeqNo: **2846769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R80688**	RunNo: **80688**	
Prep Date:	Analysis Date: **8/20/2021**	SeqNo: **2846769**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R80688** RunNo: **80688**
Prep Date: Analysis Date: **8/20/2021** SeqNo: **2846769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.5	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **2108A81-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **WMW-6** Batch ID: **R80688** RunNo: **80688**
Prep Date: Analysis Date: **8/20/2021** SeqNo: **2846772** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.9	70	130			
Toluene	20	1.0	20.00	0	99.9	70	130			
Chlorobenzene	19	1.0	20.00	0	97.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	86.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.6	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID: **2108A81-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **WMW-6** Batch ID: **R80688** RunNo: **80688**
Prep Date: Analysis Date: **8/20/2021** SeqNo: **2846773** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.9	70	130	3.36	20	
Toluene	19	1.0	20.00	0	94.6	70	130	5.42	20	
Chlorobenzene	19	1.0	20.00	0	93.0	70	130	4.53	20	
1,1-Dichloroethene	16	1.0	20.00	0	80.3	70	130	6.80	20	
Trichloroethene (TCE)	16	1.0	20.00	0	82.0	70	130	4.39	20	
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130	0	0	
Surr: Dibromofluoromethane	8.4		10.00		83.7	70	130	0	0	
Surr: Toluene-d8	9.9		10.00		99.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-62113** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **62113** RunNo: **80773**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849996** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	5.0								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	4.8	10								J
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
3,3´-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-62113** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **62113** RunNo: **80773**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849996** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	10								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	5.0								
Pentachlorophenol	ND	20								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
Surr: 2-Fluorophenol	130		200.0		67.3	15	88.8			
Surr: Phenol-d5	110		200.0		56.1	15	71.9			
Surr: 2,4,6-Tribromophenol	150		200.0		77.3	15	97.4			
Surr: Nitrobenzene-d5	78		100.0		77.6	15	117			
Surr: 2-Fluorobiphenyl	78		100.0		78.1	15	100			
Surr: 4-Terphenyl-d14	110		100.0		107	15	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **lcs-62113** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **62113** RunNo: **80773**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	87	5.0	100.0	0	86.7	28	101			
4-Chloro-3-methylphenol	170	5.0	200.0	0	83.7	28.3	103			
2-Chlorophenol	170	5.0	200.0	0	87.0	29.3	105			
1,4-Dichlorobenzene	70	5.0	100.0	0	70.4	15	87.6			
2,4-Dinitrotoluene	74	5.0	100.0	0	73.7	23.6	90.9			
N-Nitrosodi-n-propylamine	77	5.0	100.0	0	77.4	23.1	94.6			
4-Nitrophenol	110	5.0	200.0	0	56.9	15	77			
Pentachlorophenol	150	20	200.0	0	76.4	21	111			
Phenol	110	5.0	200.0	0	53.2	16.8	70.5			
Pyrene	100	5.0	100.0	0	103	30.5	129			
1,2,4-Trichlorobenzene	69	5.0	100.0	0	69.0	15	88.2			
Surr: 2-Fluorophenol	130		200.0		62.7	15	88.8			
Surr: Phenol-d5	100		200.0		50.9	15	71.9			
Surr: 2,4,6-Tribromophenol	170		200.0		84.9	15	97.4			
Surr: Nitrobenzene-d5	76		100.0		76.3	15	117			
Surr: 2-Fluorobiphenyl	84		100.0		84.3	15	100			
Surr: 4-Terphenyl-d14	64		100.0		63.7	15	120			

Sample ID: **lcsd-62113** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **62113** RunNo: **80773**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	81	5.0	100.0	0	80.8	28	101	7.13	41.2	
4-Chloro-3-methylphenol	160	5.0	200.0	0	81.6	28.3	103	2.54	44.7	
2-Chlorophenol	170	5.0	200.0	0	86.4	29.3	105	0.723	35.6	
1,4-Dichlorobenzene	70	5.0	100.0	0	69.8	15	87.6	0.836	30.4	
2,4-Dinitrotoluene	71	5.0	100.0	0	70.8	23.6	90.9	3.94	53.1	
N-Nitrosodi-n-propylamine	77	5.0	100.0	0	77.1	23.1	94.6	0.384	31.1	
4-Nitrophenol	110	5.0	200.0	0	57.5	15	77	0.922	52.4	
Pentachlorophenol	150	20	200.0	0	73.5	21	111	3.91	71.6	
Phenol	110	5.0	200.0	0	54.1	16.8	70.5	1.61	37.2	
Pyrene	100	5.0	100.0	0	101	30.5	129	1.25	51.3	
1,2,4-Trichlorobenzene	69	5.0	100.0	0	69.0	15	88.2	0.0531	31.8	
Surr: 2-Fluorophenol	110		200.0		55.0	15	88.8	0	0	
Surr: Phenol-d5	90		200.0		45.2	15	71.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		80.8	15	97.4	0	0	
Surr: Nitrobenzene-d5	71		100.0		70.5	15	117	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		73.1	15	100	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **lcsd-62113**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **62113**	RunNo: **80773**
Prep Date: **8/23/2021**	Analysis Date: **8/24/2021**	SeqNo: **2849998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	64		100.0		63.9	15	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **mb-1 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848469**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848471**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.28	20.00	80.00	0	99.1	90	110			

Sample ID: **mb-2 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848503**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-2 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848504**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.12	20.00	80.00	0	100	90	110			

Sample ID: **mb-3 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848536**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-3 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R80740**	RunNo: **80740**							
Prep Date:	Analysis Date: **8/23/2021**	SeqNo: **2848538**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.48	20.00	80.00	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2108A81**
26-Aug-21

Client: Marathon
Project: 2021 Wingate Annual GW Sampling

Sample ID: **MB-62125** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **62125** RunNo: **80763**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849366** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-62125** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **62125** RunNo: **80763**
Prep Date: **8/23/2021** Analysis Date: **8/24/2021** SeqNo: **2849367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon** Work Order Number: **2108A81** RcptNo: 1

Received By: **Kasandra Payan** **8/19/2021 4:42:00 PM** KPA

Completed By: **Desiree Dominguez** **8/19/2021 4:50:27 PM** DD

Reviewed By: JR 8/19/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
Adjusted? NO
Checked by: KPA 8/19/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good				

Chain of Custody Record

Client:	Marathon Gallup Refinery
Mailing Address:	92 Giant Crossing Road Jamestown NM,87301
Phone #:	808-640-1823
Email or Fax#:	
QA/QC Package:	Standard ☐ Level 4 (Full Validation)
Accreditation:	☐ Az Compliance NELAC ☐ Other
EDD (Type)	

Standard X Rush

Project Name: 2021 Wingate Annual GW Sampling

Project #: 697-080-001

Project Manager: Lesli Alexander/Brian McLoughlin

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.4-0.2=5.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2108A81	SW8260B	SW8270C	SW6020 (As,Ba,Cd,Ca,Pb,Se,Ag,M	SW7470	SM2320B	M254C	M4500C	E300	SW6020 (Uranium)
8/19/2021	10:15	Water	WMW-6	7		-001	x	x	x	x	x	x	x	x	x
8/19/2021	10:15	Water	FB - 8/19/2021	2		-002	x								

Analysis Request

Date	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/19/21	14:00	Brian McLoughlin		courier	8/19/21	16:42
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Hold for TCLP

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Appendix D: Tier II Data Validation Report

Tier II Data Validation Report Summary

Client: Marathon Oil	Laboratory: Hall Environmental
Project Name: Western Refining Southwest	Sample Matrix: Groundwater
Project Number: 697-086-003 Task: 0002	Sample Start Date: 07/21/2021
Date Validated: 09/02/2021	Sample End Date: 08/19/2021
Parameters Included: ▪ Volatile Organic Compounds (VOC) by Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C ▪ Anions by Methods for Chemical Analysis of Water and Wastes (MCAWW) Method 300.0 ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total Mercury by EPA Method 245.1 ▪ Total Dissolved Solids (TDS) by Standard Methods for the Examination of Water and Wastewater (SM) Method 2540C ▪ pH by SM Method 4500H+B ▪ Alkalinity by SM Method 2320B	
Laboratory Project IDs: 2107C52, 2107C54, and 2108A81	
Data Validator: Daran O'Hollearn, Lead Project Scientist	
Reviewer: Mike Phillips, Senior Chemist	

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks

Tier II Data Validation Report Summary

- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

Client Sample ID	Laboratory Sample Number
Data Set 2107C52	
WG-FB-7/21/2021	2107c52-001
WG-FB-7/22/2021	2107c52-002
TRIP BLANK	2107c52-003
Data Set 2107C54	
WMW-1R	2107c54-001
WMW-2	2107c54-002
WMW-3	2107c54-003
WMW-4	2107c54-004
WMW-5	2107c54-005
WMW-7	2107c54-006
WMW-8	2107c54-007
WMW-9	2107c54-008
WG-DUP-7/21/2021	2107c54-009
WG-DUP-7/22/2021	2107c54-010
WG-EB-7/21/2021	2107c54-011
WG-EB-7/22/2021	2107c54-012
TRIP BLANK	2107C54-013
Data Set 2108A81	
WMW-6	2108A81-001
FB-8/19/2021	2108A81-002

Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ⊗ Holding Times and Preservation (Items 6 and 7)
- ○ Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)
- ✓ Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-542-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region 1 - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, February 2021.

Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

Qualifier	Definition
J	Estimated concentration
JB	Estimated concentration due to blank contamination
UJ	Estimated reporting limit
U	Evaluated to be undetected at the reporting limit

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete combined data package consisted of 1,706 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.

VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? Yes

Comments: The laboratory did not identify non-conformances regarding the analytical data.

2. Were the data free of data qualification flags and/or notes used by the laboratory? If no, define. No

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

H – Holding times for preparation or analysis exceeded.

J – Analyte detected below quantitation limits.

R – RPD limit exceeded.

S – % Recovery outside of range due to dilution or matrix

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by a laboratory courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The reporting limits for the data set were reviewed and appeared to be acceptable. The following dilutions were applied to the project samples.

Method	Sample(s)	Analyte(s)	Dilution Factor
200.7	Multiple Samples	Dissolved Calcium	5
200.7	WMW-6, WMW-8	Dissolved Sodium	5
200.8	WMW-1R, WMW-7, WG-DUP-7/22/2021	Total Uranium	5
200.8	Multiple Samples	Dissolved Metals	5
300.0	Multiple Samples	Select Anions	5
8260B	WMW-2, WMW-9	Select VOAs	5
200.7	WMW-4, WMW-7, WG-DUP-7/22/2021	Dissolved Sodium	10
200.7	Multiple Samples	Dissolved Sodium	20
300.0	WMW-4, WMW-6	Sulfate	20
300.0	WMW-4, WMW-6, WMW-7, WG-DUP-7/22/2021	Chloride	20
200.7	WMW-3	Dissolved Sodium	50
300.0	Multiple Samples	Select Anions	50
300.0	Multiple Samples	Select Anions	100
8260B	WMW-2, WMW-9	Benzene	500

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC with the following exceptions.

Clarification of analyte lists was provided by the project team and documented in the laboratory report. No further validation action was required.

The CoC requested nitrogen nitrate using Method 300.0; however, the laboratory reported as nitrogen nitrate & nitrite.

VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of 4°C ± 2°C at 4.9°C and 5.2°C as noted on the *Sample Log-in Check Lists*.

The *Sample Log-In Checklist* noted that samples WMW-2, WMW-3, WMW-9, and WG-DUP-7/21/2021 for metals analyses were received at pH>2. Nitric acid was added in the laboratory to preserve to pH<2. Validation action was not required based on this observation.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? No

Comments: The samples were digested/extracted and analyzed within method-specific holding times, with the following exceptions.

Method 2540C: Multiple samples were analyzed for TDS outside the defined holding time of 7 days by approximately 1 day. TDS was detected in these samples and these results were assigned J qualifiers based on the holding time exceedances.

Method 4500H+B: The samples were analyzed for pH outside the method-specific holding time of 15 minutes. The pH results were qualified as J to indicate estimated concentrations.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter (µg/L), milligrams per liter (mg/L), milligrams per liter as calcium carbonate ($mgCaCO_3/L$), and pH Standard Units (SU), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

Method	Analyte	Batch	Concentration
8270C	**Bis(2-ethylhexyl)phthalate**	**61610**	**4.6 µg/L**
8270C	**Bis(2-ethylhexyl)phthalate**	**61579**	**6.2 µg/L**
8270C	**Bis(2-ethylhexyl)phthalate**	**62113**	**4.8 µg/L**
8270C	Di-n-butyl phthalate	61579	6.9 µg/L

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

Method	Analytes	Batch	MS Sample Source
200.7	Dissolved Metals	A80106	WG-EB-7/21/2021, WG-EB-7/22/2021
200.7	Dissolved Metals	A80750	Not Prepared
200.8	Total Uranium	61643	Not Prepared
200.8	Total Uranium	C80121	Not Prepared
200.8	Total Uranium	62129	Not Prepared
200.8	Dissolved Lead	B80079	WG-EB-7/22/2021
200.8	Dissolved Metals	B80249	WG-EB-7/21/2021, WG-EB-7/22/2021
200.8	Dissolved Metals	C80249	WG-EB-7/21/2021, WG-EB-7/22/2021
200.8	Dissolved Metals	B80703	Not Prepared
245.1	Total Mercury	61593	Not Prepared
245.1	Total Mercury	62116	Not Prepared
300.0	Nitrate + Nitrite	R80088	Not Prepared
300.0	Anions	R80092	WMW-8
300.0	Chloride, Sulfate	R80124	Not Prepared
300.0	Anions	R80671	Not Prepared
2320B	Alkalinity	R80263	Not Prepared
2320B	Alkalinity	R80275	Not Prepared
2320B	Alkalinity	R80740	Not Prepared
2540C	TDS	61587	Not Prepared
2540C	TDS	61618	Not Prepared
2540C	TDS	62125	Not Prepared
4500H+B	pH	R80263	Not Prepared
4500H+B	pH	R80740	Not Prepared
8260B	VOC	A80126	Not Prepared
8260B	VOC	A80133	Not Prepared
8260B	VOC	R80215	Not Prepared
8260B	Benzene	R80239	Not Prepared
8260B	VOC	R80688	WMW-6
8270C	SVOC	61579	Not Prepared
8270C	SVOC	61610	Not Prepared
8270C	SVOC	62113	Not Prepared

Not Prepared – Matrix spikes were not prepared for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for the MS/MSDs prepared from project samples were within data validation and/or laboratory QC limits.

VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPD values were within laboratory QC limits, with the following exception.

The LCS/LCSD RPD value for 4-nitrophenol by Method 8270C in batch 61610 exceeded the QC limit of 52.4% at 55.8%. The analyte 4-nitrophenol was not detected in the associated samples. These results were qualified as UJ for non-detections for the associated samples to indicate estimated reporting limits due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Method	Sample	Surrogate	Surrogate Recovery	QC Limits
8270C	WMW-7	Phenol-d_5	12.6%	15-71.9%
8270C	WMW-9	4-Terphenyl-d_{14}	128%	15-120%
8270C	**WG-DUP-7/22/2021**	**2-Fluorophenol**	**13.7%**	**15-88.8%**
8270C	**WG-DUP-7/22/2021**	**Phenol-d_5**	**11.2%**	**15-71.9%**

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples WMW-7, WMW-9, and WG-DUP-7/22/2021, and qualification of sample data was not required, with the following exception.

Method 8270C: **The recoveries of the surrogates 2-fluorophenol and phenol-d_5 for sample WG-DUP-7/22/2021 were outside the laboratory acceptance ranges of 15-88.8% and 15-71.9% at 13.7% and 11.2%, respectively. The target analytes associated with these surrogates were not detected in sample WG-DUP-7/22/2021, and the results were assigned UJ qualifiers due to evidence of potential low bias.**

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the total number of samples. Two trip blank samples, TRIP BLANK (2107C52) and TRIP BLANK (2107C54), three field blank samples, WG-FB-7/21/2021, WG-FB-7/22/2021, and FB-8/19/2021, and two equipment blank samples, WG-EB-7/21/2021 and WG-EB-7/22/2021, were collected as part of this sample set.

VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were reported as not detected in the trip, field, and equipment blank samples, with the following exceptions.

Blank Sample ID	Method	Analyte	Concentration
TRIP BLANK (2107C54)	8260B	Chloroform	3.6 µg/L
TRIP BLANK (2107C54)	8260B	Chlorobenzene	0.61 µg/L
Blank Sample ID	Method	Analyte	Concentration
WG-FB-7/21/2021	8260B	Toluene	0.27 µg/L
WG-FB-7/21/2021	**8260B**	**Acetone**	**6.4 µg/L**
WG-FB-7/22/2021	**8260B**	**Toluene**	**0.30 µg/L**
WG-FB-7/22/2021	**8260B**	**Acetone**	**6.6 µg/L**
WG-FB-7/22/2021	8260B	4-Methyl-2-Pentanone	0.89 µg/L
WG-EB-7/21/2021	2540C	TDS	37 mg/L
WG-EB-7/21/2021	8270C	Bis(2-ethylhexyl)phthalate	4.8 µg/L
WG-EB-7/21/2021	8260B	Benzene	0.23 µg/L
WG-EB-7/21/2021	8260B	Acetone	9.4 µg/L
WG-EB-7/21/2021	**8260B**	**2-Butanone**	**2.5 µg/L**
WG-EB-7/22/2021	**300.0**	**Sulfate**	**1.8 mg/L**
WG-EB-7/22/2021	300.0	Nitrate + Nitrite	0.18 mg/L
WG-EB-7/22/2021	200.7	Sodium	0.33 mg/L
WG-EB-7/22/2021	8270C	Bis(2-ethylhexyl)phthalate	4.5 µg/L
WG-EB-7/22/2021	8260B	Toluene	0.21 µg/L
WG-EB-7/22/2021	8260B	Acetone	11 µg/L
WG-EB-7/22/2021	8260B	2-Butanone	2.5 µg/L

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The bis(2-ethylhexyl)phthalate results for the samples in batches 61579 and 61610 were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

- Sample WG-DUP-7/21/2021 was collected as a field duplicate of sample WMW-5.
- Sample WG-DUP-7/22/2021 was collected as a field duplicate of sample WMW-7.

VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Tables at the end of this report, field duplicate RPD values were within the data validation QC limits of 0-30% for water samples, with the following exception.

Duplicate pair WMW-7 / WG-DUP-07/22/2021: **The RPD value for carbonate exceeded the data validation limit of 30% at 66.1%, which was evidence of poor precision. The carbonate results were qualified as J for samples WMW-7 and WG-DUP-07/22/2021.**

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

Method	Analytes	Batch	Laboratory Duplicate Sample Source
4500H+B	pH	R80263	WMW-5
2320B	Alkalinity	R80263	WMW-5
2540C	TDS	61587	WG-DUP-7/21/2021
2540C	TDS	61618	WMW-8

The RPDs for laboratory duplicates prepared from project samples were within laboratory acceptance limits or were not applicable since the results for one or both measurements were within 5 times the reporting limit.

23. Were the following data relationships realistic and acceptable?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? Yes

Comments: Target analytes 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, and naphthalene were reported by both Method 8260B and Method 8270C. These analytes were reported as not detected by both methods or were within five times the applicable reporting limit.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? N/A

Comments: Total and dissolved fractions were not performed for the same metals in this data set.

FIELD DUPLICATE SUMMARY

Client Sample ID: WMW-5 Field Duplicate Sample ID: WG-DUP-07/21/2021				
Analyte	**Method**	**Laboratory Result**	**Duplicate Result**	**Relative Percent Difference (RPD)**
Barium, Dissolved	E200.7	0.0073 mg/L	0.0076 mg/L	4.0%
Calcium, Dissolved	E200.7	190 mg/L	190 mg/L	0.0%
Sodium, Dissolved	E200.7	1,200 mg/L	1,300 mg/L	8.0%
Arsenic, Dissolved	E200.8	0.00064 mg/L	0.00086 mg/L	29.3% +/-RL
Uranium, Total	E200.8	0.024 mg/L	0.024 mg/L	0.0%
Chloride	E300.0	400 mg/L	390 mg/L	2.5%
Nitrate & Nitrite	E300.0	ND (1.0 mg/L)	0.59 mg/L	DL
Sulfate	E300.0	2,000 mg/L	2,000 mg/L	0.0%
Solids, Total Dissolved	SM 2540 C	4,340 mg/L	4,310 mg/L	0.7%
pH	SM 4500-H+ B	8.03 Std Units	8.11 Std Units	1.0%
Alkalinity	SM2320B	753.8 mg/L CaCO3	753.4 mg/L CaCO3	0.1%
Bicarbonate as CaCO3	SM2320B	753.8 mg/L CaCO3	753.4 mg/L CaCO3	0.1%
Acetone	SW8260B	3.8 µg/L	ND (10 µg/L)	DL
Bis(2-ethylhexyl)phthalate	SW8270C	ND (10 µg/L)	4.6 µg/L	DL
Di-n-octylphthalate	SW8270C	6.6 µg/L	ND (20 µg/L)	DL

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region 1 - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

Client Sample ID: WMW-7 Field Duplicate Sample ID: WG-DUP-07/22/2021				
Analyte	**Method**	**Laboratory Result**	**Duplicate Result**	**Relative Percent Difference (RPD)**
Barium, Dissolved	E200.7	0.027 mg/L	0.029 mg/L	7.1%
Calcium, Dissolved	E200.7	37 mg/L	37 mg/L	0.0%
Sodium, Dissolved	E200.7	900 mg/L	880 mg/L	2.2%
Arsenic, Dissolved	E200.8	0.00037 mg/L	ND (0.0050 mg/L)	DL
Lead, Dissolved	E200.8	0.000058 mg/L	0.000072 mg/L	21.5% +/-RL
Uranium, Total	E200.8	0.031 mg/L	0.031 mg/L	0.0%
Chloride	E300.0	200 mg/L	200 mg/L	0.0%
Sulfate	E300.0	1,000 mg/L	1,100 mg/L	9.5%
Solids, Total Dissolved	SM 2540 C	2,620 mg/L	2,720 mg/L	3.7%
pH	SM 4500-H+ B	8.37 Std Units	8.44 Std Units	0.8%
Alkalinity	SM2320B	740.9 mg/L CaCO3	740.5 mg/L CaCO3	0.1%
Bicarbonate as CaCO3	SM2320B	734.4 mg/L CaCO3	727.6 mg/L CaCO3	0.9%
Carbonate	**SM2320B**	**6.480 mg/L CaCO3**	**12.88 mg/L CaCO3**	**66.1%**
Acetone	SW8260B	3.7 µg/L	4.6 µg/L	21.7% +/-RL
Benzene	SW8260B	ND (1.0 µg/L)	0.37 µg/L	DL
Bis(2-ethylhexyl)phthalate	SW8270C	5.2 µg/L	4.5 µg/L	14.4% +/-RL

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region 1 - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for carbonate exceeded the data validation limit of 30% at 66.1%, which was evidence of poor precision. The carbonate results were qualified as J for samples WMW-7 and WG-DUP-07/22/2021.

DATA QUALIFICATION SUMMARY

Abbreviation	Reason
EBD	Equipment blank detection
ERPD-FD	High field duplicate RPD.
ERPD-LCS	The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision.
FBD	Field blank detection
HT-AN	Sample was analyzed outside of the method holding time.
LR-SUR	The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias.
MBD	Method blank detection
MDLRL	Flagged by the laboratory: The result was greater than the MDL but less than the RL.

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
1,2-Dichloroethane	SW8260B	WMW-2	2107c54-002a	1.3	5.0	µg/L	J	MDLRL
1,2-Dichloroethane	SW8260B	WMW-4	2107c54-004a	0.37	1.0	µg/L	J	MDLRL
1,2-Dichloroethane	SW8260B	WMW-9	2107c54-008a	1.5	5.0	µg/L	J	MDLRL
1-Methylnaphthalene	SW8260B	WMW-2	2107c54-002a	9.0	20	µg/L	J	MDLRL
1-Methylnaphthalene	SW8270C	WMW-2	2107C54-002B	3.5	5.0	µg/L	J	MDLRL
1-Methylnaphthalene	SW8260B	WMW-9	2107c54-008a	4.4	20	µg/L	J	MDLRL
1-Methylnaphthalene	SW8270C	WMW-9	2107c54-008b	2.4	5.0	µg/L	J	MDLRL
2,4,5-Trichlorophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2,4,6-Trichlorophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2,4-Dichlorophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2,4-Dimethylphenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2,4-Dinitrophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2-Butanone	SW8260B	WMW-1R	2107c54-001a	2.2	10	µg/L	U	EBD, MDLRL

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
2-Butanone	SW8260B	WG-EB-7/21/2021	2107c54-011a	2.5	10	µg/L	J	MDLRL
2-Butanone	SW8260B	WG-EB-7/22/2021	2107c54-012a	2.5	10	µg/L	J	MDLRL
2-Chlorophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2-Methylnaphthalene	SW8260B	WMW-2	2107c54-002a	15	20	µg/L	J	MDLRL
2-Methylnaphthalene	SW8270C	WMW-2	2107C54-002B	5.0	5.0	µg/L	J	MDLRL
2-Methylnaphthalene	SW8260B	WMW-9	2107c54-008a	5.7	20	µg/L	J	MDLRL
2-Methylnaphthalene	SW8270C	WMW-9	2107c54-008b	1.9	5.0	µg/L	J	MDLRL
2-Methylphenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
2-Nitrophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
3,4-Methylphenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
4,6-Dinitro-2-methylphenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
4-Chloro-3-Methylphenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
4-Methyl-2-Pentanone	SW8260B	WG-FB-7/22/2021	2107c52-002a	0.89	10	µg/L	J	MDLRL
4-Methyl-2-Pentanone	SW8260B	WMW-2	2107c54-002a	21	50	µg/L	J	MDLRL
4-Nitrophenol	SW8270C	WMW-7	2107c54-006b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-8	2107c54-007b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-9	2107c54-008b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WG-DUP-7/21/2021	2107c54-009b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WG-EB-7/21/2021	2107c54-011b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WG-EB-7/22/2021	2107c54-012b	ND	5.0	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	ERPD-LCS, LR-SUR
Acenaphthene	SW8270C	WMW-2	2107C54-002B	1.6	5.0	µg/L	J	MDLRL
Acetone	SW8260B	WG-FB-7/21/2021	2107c52-001a	6.4	10	µg/L	J	MDLRL
Acetone	SW8260B	WG-FB-7/22/2021	2107c52-002a	6.6	10	µg/L	J	MDLRL
Acetone	SW8260B	WMW-1R	2107c54-001a	4.6	10	µg/L	U	FBD, MDLRL

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
Acetone	SW8260B	WMW-2	2107c54-002a	20	50	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WMW-4	2107c54-004a	3.9	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WMW-5	2107c54-005a	3.8	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WMW-7	2107c54-006a	3.7	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WMW-8	2107c54-007a	3.7	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WMW-9	2107c54-008a	16	50	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WG-DUP-7/22/2021	2107c54-010a	4.6	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WG-EB-7/21/2021	2107c54-011a	9.4	10	µg/L	U	FBD, MDLRL
Acetone	SW8260B	WG-EB-7/22/2021	2107c54-012a	11	10	µg/L	JB	FBD
Arsenic, Dissolved	E200.8	WMW-6	2108A81-001E	0.00056	0.0010	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WMW-2	2107C54-002E	0.00041	0.0010	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WMW-3	2107C54-003E	0.0019	0.0050	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WMW-5	2107C54-005E	0.00064	0.0050	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WMW-7	2107C54-006E	0.00037	0.0010	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WMW-8	2107C54-007E	0.00053	0.0010	mg/L	J	MDLRL
Arsenic, Dissolved	E200.8	WG-DUP-7/21/2021	2107C54-009E	0.00086	0.0050	mg/L	J	MDLRL
Benzene	SW8260B	WMW-4	2107c54-004a	0.39	1.0	µg/L	J	MDLRL
Benzene	SW8260B	WG-DUP-7/22/2021	2107c54-010a	0.37	1.0	µg/L	J	MDLRL
Benzene	SW8260B	WG-EB-7/21/2021	2107c54-011a	0.23	1.0	µg/L	J	MDLRL
Benzyl Alcohol	SW8270C	WMW-3	2107C54-003B	1.5	5.0	µg/L	J	MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-6	2108a81-001b	6.0	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-1R	2107C54-001B	4.9	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-2	2107C54-002B	5.0	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-3	2107C54-003B	4.7	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-4	2107C54-004B	5.5	10	µg/L	U	MBD, MDLRL

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-7	2107c54-006b	5.2	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-8	2107c54-007b	5.1	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WMW-9	2107c54-008b	4.9	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WG-DUP-7/21/2021	2107c54-009b	4.6	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WG-DUP-7/22/2021	2107c54-010b	4.5	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WG-EB-7/21/2021	2107c54-011b	4.8	10	µg/L	U	MBD, MDLRL
Bis(2-ethylhexyl)phthalate	SW8270C	WG-EB-7/22/2021	2107c54-012b	4.5	10	µg/L	U	MBD, MDLRL
Carbazole	SW8270C	WMW-2	2107C54-002B	4.1	5.0	µg/L	J	MDLRL
Carbonate	2320B	WG-DUP-7/22/2021	2107c54-010C	12.88	2.000	mg/L CaCO3	J	ERPD-FD
Carbonate	2320B	WMW-7	2107c54-006C	6.480	2.000	mg/L CaCO3	J	ERPD-FD
Chlorobenzene	SW8260B	TRIP BLANK	2107C54-013A	0.61	1.0	µg/L	J	MDLRL
Chloromethane	SW8260B	WMW-2	2107c54-002a	11	15	µg/L	J	MDLRL
Chloromethane	SW8260B	WMW-4	2107c54-004a	1.0	3.0	µg/L	J	MDLRL
Chromium, Dissolved	E 200.7	WMW-3	2107C54-003E	0.0020	0.0060	mg/L	J	MDLRL
Dibenzofuran	SW8270C	WMW-2	2107C54-002B	2.6	5.0	µg/L	J	MDLRL
Di-n-octylphthalate	SW8270C	WMW-6	2108a81-001b	5.1	20	µg/L	J	MDLRL
Di-n-octylphthalate	SW8270C	WMW-3	2107C54-003B	6.8	20	µg/L	J	MDLRL
Di-n-octylphthalate	SW8270C	WMW-4	2107C54-004B	6.7	20	µg/L	J	MDLRL
Di-n-octylphthalate	SW8270C	WMW-5	2107C54-005B	6.6	20	µg/L	J	MDLRL
Fluoranthene	SW8270C	WMW-2	2107C54-002B	4.7	10	µg/L	J	MDLRL
Fluorene	SW8270C	WMW-2	2107C54-002B	3.4	5.0	µg/L	J	MDLRL
Fluorene	SW8270C	WMW-9	2107c54-008b	3.4	5.0	µg/L	J	MDLRL
Isopropylbenzene	SW8260B	WMW-2	2107c54-002a	4.6	5.0	µg/L	J	MDLRL
Isopropylbenzene	SW8260B	WMW-9	2107c54-008a	4.9	5.0	µg/L	J	MDLRL
Lead, Dissolved	E200.8	WMW-7	2107C54-006E	0.000058	0.00050	mg/L	J	MDLRL

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
Lead, Dissolved	E200.8	WG-DUP-7/22/2021	2107C54-010E	0.000072	0.00050	mg/L	J	MDLRL
Nitrate & Nitrite	E300	WG-DUP-7/21/2021	2107C54-009C	0.59	1.0	mg/L	J	MDLRL
Nitrate & Nitrite	E300	WG-EB-7/22/2021	2107C54-012C	0.18	1.0	mg/L	J	MDLRL
n-Propylbenzene	SW8260B	WMW-2	2107c54-002a	3.2	5.0	µg/L	J	MDLRL
n-Propylbenzene	SW8260B	WMW-9	2107c54-008a	3.7	5.0	µg/L	J	MDLRL
Pentachlorophenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	20	µg/L	UJ	LR-SUR
pH	4500-H+ B	WMW-6	2108A81-001C	8.12	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-1R	2107C54-001C	7.68	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-2	2107C54-002C	8.06	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-3	2107C54-003C	8.07	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-4	2107C54-004C	8.19	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-5	2107C54-005C	8.03	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-7	2107C54-006C	8.37	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-8	2107C54-007C	8.37	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WMW-9	2107C54-008C	8.52	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WG-DUP-7/21/2021	2107C54-009C	8.11	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WG-DUP-7/22/2021	2107C54-010C	8.44	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WG-EB-7/21/2021	2107C54-011C	6.10	0.100	Std Units	J	HT-AN
pH	4500-H+ B	WG-EB-7/22/2021	2107C54-012C	4.52	0.100	Std Units	J	HT-AN
Phenanthrene	SW8270C	WMW-2	2107C54-002B	4.1	5.0	µg/L	J	MDLRL
Phenanthrene	SW8270C	WMW-9	2107c54-008b	3.9	5.0	µg/L	J	MDLRL
Phenol	SW8270C	WG-DUP-7/22/2021	2107c54-010b	ND	5.0	µg/L	UJ	LR-SUR
Selenium, Dissolved	E200.8	WMW-3	2107C54-003E	0.0026	0.0050	mg/L	J	MDLRL
Silver, Dissolved	E 200.7	WMW-1R	2107C54-001E	0.0016	0.0050	mg/L	J	MDLRL
Sodium, Dissolved	E 200.7	WG-EB-7/22/2021	2107C54-012E	0.33	1.0	mg/L	J	MDLRL

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
Solids, Total Dissolved	SM 2540 C	WMW-1R	2107C54-001C	3,920	100	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WMW-2	2107C54-002C	3,940	100	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WMW-3	2107C54-003C	6,580	200	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WMW-5	2107C54-005C	4,340	20	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WMW-8	2107C54-007C	875	20	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WMW-9	2107C54-008C	2,730	100	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WG-DUP-7/21/2021	2107C54-009C	4,310	20.0	mg/L	J	HT-AN
Solids, Total Dissolved	SM 2540 C	WG-EB-7/21/2021	2107C54-011C	37	20.0	mg/L	J	HT-AN
Sulfate	E300	WMW-9	2107C54-008C	3.4	2.5	mg/L	JB	EBD
Sulfate	E300	WG-EB-7/22/2021	2107C54-012C	1.8	2.5	mg/L	J	MDLRL
Toluene	SW8260B	WG-FB-7/21/2021	2107c52-001a	0.27	1.0	µg/L	J	MDLRL
Toluene	SW8260B	WG-FB-7/22/2021	2107c52-002a	0.30	1.0	µg/L	J	MDLRL
Toluene	SW8260B	WG-EB-7/22/2021	2107c54-012a	0.21	1.0	µg/L	U	FBD, MDLRL

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 49267

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 49267
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Accepted for Record Retention Purposes-Only	11/22/2022