

Western Refining Southwest LLC

A subsidiary of Marathon Petroleum Corporation

September 14, 2022

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

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

Dear Mr. Billings:

Attached please find the 2022 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

ohn Moore

Ruth Cade Vice-President

Enclosure

pdfc: D. Cobrain, NMED HWB L. Barr, NMOCD K. Luka, Marathon Petroleum Company H. Jones, Trihydro Corporation L. Andres, NMED HWB M. Bracey, Marathon Petroleum Company J. Moore, Marathon Wingate Facility ATTACHMENT



WESTERN REFINING SOUTHWEST LLC

MARATHON WINGATE FACILITY

ANNUAL GROUNDWATER REPORT

SEPTEMBER 2022

Printed on September 8, 2022



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- B. Laboratory Reports
- C. Tier II Data Validation Report

List of Acronyms

AP-121	Abatement Plan No. 121
mg/L	milligrams per liter
NM	New Mexico
OCD	Oil Conservation Division
SPH	separate phase hydrocarbon
SVOC	semi-volatile organic compound
VOC	volatile organic compound
WQCC	Water Quality Control Commission



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)(NM OCD 2015). This Report describes water quality monitoring activities completed during 2022. 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 feedstock was received via pipelines from four natural gas facilities. The Facility historically produced propane, butane, isobutane, natural gas liquid (light gasoline), and mixed butane.

This Report summarizes the groundwater monitoring activities conducted at the Facility on July 12 and 13, 2022. The following information is provided:

- Summary of monitoring activities that occurred during 2022
- Summary table of analytical results
- Fluid level and potentiometric surface maps



2.0 Fluid Level Gauging

Trihydro Corporation (Trihydro) collected fluid level measurements from nine monitoring wells at the Facility on July 12 and 13, 2022. There are six wells located on site and three wells off site (Figure 2-1). Field logs for the 2022 monitoring event are included in Appendix A.

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 2022 sampling event. The interface probe was decontaminated after use at each monitoring well location.

The 2022 groundwater elevations were calculated from the depth to groundwater and ground surface elevation measurements and are presented in Table 2-1. The measuring point elevation of WMW-9 was surveyed in February 2022. This resulted in a correction of the 2021 water surface elevations from the 2021 annual report.

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 northeast 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 historically observed groundwater elevations, 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. The groundwater elevation in 2022 was consistent with historical levels as well (Figure 2-3).

Because of a 10-foot discrepancy between the 2019 and 2020 gauging events, WMW-3 was proposed to be plugged and abandoned in 2020. Due to delays caused by the COVID-19 pandemic, this abandonment has not occurred. A well permit could not be secured in time to plug and abandon the well in 2022. The current proposal is to replace WMW-3 before the 2023 annual sampling event, contingent upon negotiation of access with the Navajo Nation.



3.0 Groundwater Sampling

Groundwater samples were collected on July 12 and 13, 2022, from the nine monitoring wells. 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 at least every three minutes while groundwater from each well was extracted. The groundwater was extracted until the field parameters stabilized within 10 percent variability. Field parameters included temperature, pH, conductivity, total dissolved solids, salinity, 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 Calcium Carbonate 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 samples (i.e., field duplicates, equipment blanks, and trip blanks) were collected and submitted under chain-of-custody controls for laboratory analysis. A duplicate groundwater sample, field blank, and equipment blank were collected at monitoring well WMW-5. The duplicate sample and equipment blank were analyzed for the same constituents as the monitoring wells. The field blank was analyzed for VOCs. One 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 B.

The 2022 groundwater analytical results for VOCs, SVOCs, metals, and general chemistry analytes are provided in Tables 4-1, 4-2, 4-3, and 4-4, 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 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, as presented 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 (23 milligrams per liter [mg/L]) continues to exceed the groundwater quality standard (0.005 mg/L). The groundwater sample from monitoring well WMW-9 also exceeded the groundwater standard of benzene (5.2 mg/L) but was lower than the sample from 2021 (21 mg/L). Multiple investigations have taken place to delineate dissolved phase benzene near WMW-2, including the installation of WMW-9. WMW-9 will continue to 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 2022. Three metals exceeded their respective standards during 2022: dissolved arsenic exceeded in WMW-1R, WMW-2, and WMW-9; dissolved selenium in WMW-2 and WMW-9; and total uranium exceeded in WMW-3. Chloride, total dissolved solids, and sulfate have historically exceeded the WQCC groundwater quality standards across the Facility, and exceedances for these analytes were identified in 2022, as well. These exceedances are generally consistent with historical monitoring. It should also be noted that in the wells where arsenic resulted in a non-detection, the detection limit (0.02 mg/L) exceeded the applicable standard



(0.01 mg/L). All data provided by analyses where the limit of detection values exceed standard values are considered data quality exceptions and will not be used to demonstrate compliance.

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 C. Several data were rejected during the QC process (labeled "R" in the data validation reports):

- Carbonate in WMW-9 was rejected because the sample was analyzed outside of the holding time.
- SVOC non-detects in the duplicate sample (WMW-5 DUP) were rejected because the surrogate recoveries were less than 10%, indicating low bias. Phenol is the only compound in the target SVOC list that was rejected. The other compounds are included in the "all other SVOCs" category.

A total of 15 data points were rejected. The data completeness measure was calculated at 99.04% and is acceptable.



5.0 Summary

Groundwater monitoring activities at the Facility occurred on July 12 and 13, 2022. Activities included fluid level gauging and groundwater sampling. Analytical results were compared against WQCC groundwater quality standards and exceedances were noted in Section 4.0.

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

Trihydro has completed several investigations to delineate the dissolved phase benzene at the Facility. A fifth phase of the investigation was conducted the week of June 28, 2022. 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.

Two new groundwater monitoring wells (WMW-10 and WMW-11) are scheduled to be installed before the next annual sampling event occurs in July 2023. Additionally, WMW-3 is scheduled to be plugged, abandoned, and replaced before the July 2023 sampling event, after property ownership is verified and access is obtained, if necessary. The Facility will notify OCD for approval prior to installation of the new wells and the replacement well WMW-3.



6.0 References

New Mexico Oil Conservation Division (NM OCD). 2015. Abatement Plan No. 121.

EPA. 2022. National Primary Drinking Water Regulations. Available at: <u>https://www.epa.gov/ground-</u> water-and-drinking-water/national-primary-drinking-water-regulations.

New Mexico Environment Department (NMED). 2017. Final RCRA Post-Closure Permit, Western Refining Southwest, Inc., Gallup Refinery, EPA ID NM No. NM000333211. September.

Figures



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APPROXIMATE PROPERTY BOUNDARY

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)	FACILITY MAP								
729	WIN REF	GATE 2022 G FINING SOUT FACILIT	ROUNDWAT HWEST LLC, FY, GALLUP,	ER REPORT, WESTERN MARATHON WINGATE NEW MEXICO					
ed	By: BN	Scale: 1" = 300'	Date: 8/3/22	File: 697-WIN_SITEPLAN					



				FIGURE	2_2		
				TICONE			
Tribudro 1252 Commerce Drive Laramie, Wyoming 82070 www.tihydro.com (P) 307/745.7729		POTENTIOMETRIC SURFACE MAP (JULY 2022)					
		WIN REF	GATE 2022 G INING SOUT FACILI	ROUNDWAT HWEST LLC, ſY, GALLUP,	ER REPORT, WESTERN MARATHON WINGATE NEW MEXICO		
Drawn By: SB	Checked	By: BN	Scale:1" = 300'	Date: 9/1/22	File: 697-WIN_PSMAP-2022		













FIGURE 4-2. SULFATE CONCENTRATION VS. TIME WINGATE 2022 GROUNDWATER REPORT WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO



FIGURE 4-3. TOTAL DISSOLVED SOLIDS CONCENTRATION VS. TIME WINGATE 2022 GROUNDWATER REPORT WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO



FIGURE 4-4. BENZENE CONCENTRATIONS OF WMW-2 AND WMW-9 VS. TIME WINGATE 2022 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



FIGURE 4-5. TOTAL XYLENES CONCENTRATION OF WMW-2 VS. TIME WINGATE 2022 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

Tables

TABLE 2-1. FLUID LEVEL MONITORING (2022)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-amsl)
WMW-1R	7/13/2022	ND	11.12	6592.65
WMW-2	7/13/2022	ND	6.83	6588.05
WMW-3	7/12/2022	ND	8.30	6586.62
WMW-4	7/13/2022	ND	8.64	6586.85
WMW-5	7/13/2022	ND	7.42	6589.69
WMW-6	7/13/2022	ND	13.14	6590.72
WMW-7	7/13/2022	ND	9.20	6585.50
WMW-8	7/12/2022	ND	8.34	6585.71
WMW-9	7/13/2022	ND	7.71	6588.87

Notes:

ft-bmp = feet below measuring point ft-amsl = feet above mean sea level

ND = Not detected

TABLE 4-1. GROUNDWATER VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2022) WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes, Total (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	2-Butanone (mg/L)	Chloromethane	1,2-Dichloro-ethane (mg/L)
	07/12/22	ND(0.001)								
	07/13/22	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-2	07/13/22	23	0.096	ND(0.05)	0.13	0.026 J	ND(0.5)	ND(0.5)	ND(0.15)	ND(0.05)
WMW-3	07/12/22	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	07/13/22	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-5	07/13/22	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-5 Dup	07/13/22	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	07/13/22	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	07/13/22	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-8	07/12/22	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-9	07/13/22	5.2	0.035 J	ND(0.05)	0.051 J	ND(0.1)	ND(0.5)	ND(0.5)	ND(0.15)	ND(0.05)

NMED GW Cleanup Level	0.005	0.7	1	0.62	0.03	NA	
Notes:							
Dup - duplicate sample							
J - Estimated concentration							
NA - not applicable							
ND - not detected							
mg/L - milligrams per liter							
VOC - volatile organic compounds							
Bolded results exceed the NMED GW Cleanup Le	vel						
NMED GW Cleanup Level - New Mexico Environn	nent Department Groundw	ater Cleanup Levels, New Mexico	Administrative Code 20.6.2.	.3103			
ProjectDirect: Analytical Table 4-1. VOCs PK:8111 RK:10	01704						

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TABLE 4-1. GROUNDWATER VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2022) WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	lsopropyl-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	07/13/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-2	07/13/22	ND(0.05)	ND(0.5)	ND(0.2)	ND(0.2)	ND(0.05)	0.031 J	ND(0.05)	ND
WMW-3	07/12/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-4	07/13/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-5	07/13/22	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	07/13/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-6	07/13/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-7	07/13/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-8	07/12/22	ND(0.001)	ND(0.01)	ND(0.004)	ND(0.004)	ND(0.001)	ND(0.001)	ND(0.001)	ND
WMW-9	07/13/22	ND(0.05)	ND(0.5)	ND(0.2)	ND(0.2)	ND(0.05)	ND(0.05)	ND(0.05)	ND

NMED GW Cleanup Level	NA	NA	NA	NA	NA	NA	
Notes:							
Dup - duplicate sample							
J - Estimated concentration							
NA - not applicable							
ND - not detected							
mg/L - milligrams per liter							
VOC - volatile organic compounds							
Bolded results exceed the NMED GW Cleanup Level	+ Donortmont Croundu	eter Cleanur I evela New Mevie	Administrative Code 20 6 2 5	24.02			
	t Department Groundw	ater Cleanup Levels, New Mexico	5 Administrative Code 20.6.2.3	5103			
ProjectDirect: Analytical Table 4-1. VOCs PK:8111 RK:10170	4						

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TABLE 4-2. GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2022) WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO Bis(2-ethyl beyyl)-

Location ID	Date Sampled	Acenaphthene (mg/L)	Benzyl Alcohol (mg/L)	phthalate (mg/L)	Carbazole (mg/L)	Dibenzo-furan (mg/L)	Di-n-octyl-phthalate (mg/L)	Fluoranthene (mg/L)	Fluorene (mg/L)	Phenanthrene (mg/L)
WMW-1R	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-2	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-3	07/12/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-4	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-5	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-5 Dup	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-6	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-7	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
WMW-8	07/12/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)
<u>WMW-9</u>	07/13/22	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)

NMED GW Cleanup Level	NA	NA	NA	NA	NA	NA	
Notes:							
Dup - duplicate sample							
J - Estimated concentration							
NA - not applicable							
ND - not detected							
mg/L - milligrams per liter							
R - Rejected, Data not usable							
SVOC - semi-volatile organic compounds							
Bolded results exceed the NMED GW Cleanup L	evel						
NMED GW Cleanup Level - New Mexico Environ	ment Department Groundwa	ter Cleanup Levels, New Mexic	o Administrative Code 20.6.2.3	103			

ProjectDirect: Analytical Table 4-2. SVOCs PK:8111 RK:101705

NA

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TABLE 4-2. GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUNDS ANALYTICAL DATA (2022) WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Phenol	Naphthalene	1-Methyl-naphthalene	2-Methyl-naphthalene	All Other SVOCs
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
WMW-1R	07/13/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-2	07/13/22	ND(0.02)	0.011	0.0046 J	0.0058	ND
WMW-3	07/12/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-4	07/13/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-5	07/13/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-5 Dup	07/13/22	ND(0.02) R	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-6	07/13/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-7	07/13/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
WMW-8	07/12/22	ND(0.02)	ND(0.005)	ND(0.005)	ND(0.005)	ND
<u>WMW-9</u>	07/13/22	0.19	ND(0.005)	ND(0.005)	ND(0.005)	ND

, New Mexico Administrative Cod	de 20.6.2.3103		
	, New Mexico Administrative Co	, New Mexico Administrative Code 20.6.2.3103	, New Mexico Administrative Code 20.6.2.3103

ProjectDirect: Analytical Table 4-2. SVOCs PK:8111 RK:101705

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TABLE 4-3. GROUNDWATER METALS ANALYTICAL DATA (2022) WESTERN REFINING SOUTHWEST LLC, MARATHON WINGATE FACILITY, GALLUP, NEW MEXICO

Location ID	Date Sampled	Arsenic, Dissolved E (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	07/13/22	0.023	0.07	ND(0.002)	340	ND(0.006)	ND(0.02)	ND(0.0002)	ND(0.05)	0.0065 JB	900	0.029
WMW-2	07/13/22	0.021	0.6	ND(0.002)	43	ND(0.006)	ND(0.02)	ND(0.0002)	0.074	0.001J/ND(0.005) U*	1500	ND(0.0005)
WMW-3	07/12/22	ND(0.02)	0.043	ND(0.002)	170	0.0063	ND(0.02)	ND(0.0002)	ND(0.05)	0.0019J/ND(0.005) U*	2100	0.054
WMW-4	07/13/22	ND(0.02)	0.054	ND(0.002)	19	ND(0.006)	ND(0.02)	ND(0.0002)	0.047 J	ND(0.005)	580	0.00096
WMW-5	07/13/22	ND(0.02)	0.0053 J	ND(0.002)	220	ND(0.006)	ND(0.02)	ND(0.0002)	0.047 J	0.0037J/ND(0.005) U*	1200	0.021
WMW-5 Dup	07/13/22	ND(0.02)	0.005 J	ND(0.002)	220	ND(0.006)	ND(0.02)	ND(0.0002)	0.039 J	0.0042J/ND(0.005) U*	1200	0.018
WMW-6	07/13/22	ND(0.02)	0.034	ND(0.002)	36	ND(0.006)	ND(0.02)	ND(0.0002)	0.041 J	0.0013J/ND(0.005) U*	340	0.009
WMW-7	07/13/22	ND(0.02)	0.021	ND(0.002)	25	ND(0.006)	ND(0.02)	ND(0.0002)	ND(0.05)	0.0011J/ND(0.005) U*	880	0.026
WMW-8	07/12/22	0.02 J	0.13	ND(0.002)	34	ND(0.006)	ND(0.02)	ND(0.0002)	0.038 J	ND(0.005)	280	0.013
<u>WMW-9</u>	07/13/22	0.027	0.87	ND(0.002)	20	ND(0.006)	ND(0.02)	ND(0.0002)	0.056	ND(0.005)	900	0.0048

NMED GW Cleanup Level	0.01	2	0.005	NA	0.05	0.015	0.002	0.05
Notes:								
Dup - duplicate sample								
J - Estimated concentration								
JB - Estimated concentration due to blank con	tamination							
NA - not applicable								
ND - not detected								
mg/L - milligrams per liter								
U - Evaluated to be undetected at the reported	l concentration							
Bolded results exceed the NMED GW Cleanur	o Level							
NMED GW Cleanup Level - New Mexico Envir	onment Department Grour	ndwater Cleanup Levels	, New Mexico Administrativ	e Code 20.6.2.3103				
* - The first result represents the laboratory rep	orted concentration. The	second result was evalu	uated to be undetected at th	ne reported concentration	h by the data validator. The	he result was determined	to be a false positive.	

ProjectDirect: Analytical Table 4-3. Metals PK:8111 RK:101706

0.05	NA	0.03

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TABLE 4-4. GROUNDWATER GENERAL CHEMISTRY ANALYTICAL DATA (2022) 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	07/13/22	755.1	755.1	ND(2)	460		ND(1)	ND(1)	7.48 J	3760	1700
WMW-2	07/13/22	2098	2098	ND(5)	1100		ND(1)	ND(1)	7.91 J	3860	ND(5)
WMW-3	07/12/22	1061	1061	ND(2)	1300	ND(1)			7.76 J	6700	24 0 0
WMW-4	07/13/22	750.6	750.6	ND(2)	190		ND(1)	ND(1)	8.02 J	1560	370
WMW-5	07/13/22	717.6	717.6	ND(2)	450		0.27 Ĵ	ND(1)	7.47 J	4170	2200
WMW-5 Dup	07/13/22	730.8	730.8	ND(2)	450		ND(1)	ND(1)	7.73 J	4250	2200
WMW-6	07/13/22	446.6	446.6	ND(2)	65		ND(1)	ND(1)	7.99 J	1040	320
WMW-7	07/13/22	692.4	692.4	ND(2)	200		ND(1)	ND(1)	8.27 J	2530	1100
WMW-8	07/12/22	477.6	477.6	ND(2)	32	ND(1)			7.96 J	862	180
<u>WMW-9</u>	07/13/22	1376 J	1376 J	ND(5) R	380		ND(1)	ND(1)	8.09 J	2420	19

NMED GW Cleanup Level	NA	NA	NA	250	NA	10	1
Notes:							
data not available							
CaCO3 - calcium carbonate							
Dup - duplicate sample							
J - Estimated concentration							
NA - not applicable							
ND - not detected							
mg/L - milligrams per liter							
R - Rejected, Data not usable							
Std - standard							
Bolded results exceed the NMED GW Cleanu	p Level						
NMED GW Cleanup Level - New Mexico Envi	ronment Department Grour	ndwater Cleanup Levels, New	Mexico Administrative Cod	e 20.6.2.3103			
ProjectDirect: Analytical Table 4-4. Gen Chem PK:8	111 RK:101707						

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Appendix A. Field Logs

WESTERN REFINING - GALLUP WINGATE FACILITY 2022 ANNUAL GROUNDWATER SAMPLING

· \\/ELL	מו י			an a		TEST PAR	AMETERS	and the second statement of the se			
WMW	√-1R	Volumes	TIME	pН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)	
GAUGE DATE	>/13	Initial	9:31	7.07	13.8	3.611	2.587	2.47	0.43	-/2.8	
GAUGE TIME		1	9:34	7.07	13.9	3.641	3,004	2.48	0,40	-12.2	
DHC (FEET)	, 5%4000044	2	9:37	7.07	13,9	3,642	2,995	2.48	0.57	-12.1	
DTW (FEET)	11.12	3								and the second sec	
DTB (FEET)	19.17	4							a company of the second frame		
		5							n	· · · · · · · · · · · · · · · · · · ·	
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SAMPLE DATE	7/13	WEATH	ER CONDIT	TONS:	lend	170	<u>- /~ </u>			a nadala - parte a successiva a material de la successiva de la successiva de la successiva de la successiva d	
DTW (FEET)	11.12	WATER	APPEARAN	$\frac{100}{c}$	DR: /	1 No	<u> O_cla-</u>	uri Ramillo a ¹⁰ Marando ¹⁰ a maran a da marana a marana a marana da marana	n - 1 m - 160% m - 1 m - 1996 March - 1996 March - 1997 March - 1996 March - 1996 March - 1997 March - 1997 March - 1996 March - 1996 March - 1997 March - 1996 March - 1996 March - 1996 March -		
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WM	IW-2	Volumes	TIME	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	7/13	Initial	14:13	6.75	13.6	4.587	3.809	3.20	0.63	-129.4
GAUGE TIME	14:00	1	14-16	6.75	13.8	4.612	3.81	3.20	0,60	131.0
DHC (FEET)	\$. EB	2	14:19	6.75	13.7	4 37	3.806	3.20	6.59	- 1325
DTW (FEET)	6.83	3	,,							
DTB (FEET)	26.12	4		an a	and a second	Statistical Production Service Service			andy one i i i Visilandan one menya nanja .	
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DTW (FEET)	6.83	WATER /	APPEARAN	CE/ODOF -/el-	K: / H-pla	1 certe	·	 	2 2	
SAMPLE TIME	14.23	COMME	NTS:	1				99 an an ann an Anna Anna Anna Anna Anna		
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		PERISTA	LTIC PUMP	•				an a	an a	and a first an and a second
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AA C		_	1			TEST PAP	RAMETERS			
WN	1W-3	Volumes	TIME	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORF
GAUGE DATE	7/12-	Initial	1:13	6.93	14.3	0,22.79	1.774.9	1.27	2.43	1.8
GAUGE TIME		1	1:17	6.93	14.1	2298	1241	7.2.3	7 75	728
DHC (FEET)	er Titatyer	2	1:20	6.93	13.8	3245	2675	2.21	2.23	20
DTW (FEET)	8.30	3	1:23	6.93	13.8	2688	2660	2.19	2.10	25
DTB (FEET)	10.18	4				2210	1	and a second	an a	
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SAMPLE DATE	7/12	WEATHE	R CONDITI	IONS:	89 °,	nere a construction and a second s			್ರಾನ್ ಇದನ್ನು 2020ರಲ್ಲಿ ನಿರ್ದೇಶಗಳಲ್ಲಿ ನಿರ್ದೇ	
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WN	1W-4	Volumes	TIME	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	7/13	Initial	13:36	6.45	13.5	1.823	1.520	1.21	1.20	-160.5
GAUGE TIME	13:23	1	13:39	6.46	13.5	1.816	1.573	1.20	1.65	-/18 0
DHC (FEET)	6	2	13:42	6.47	13.5	1.819	1.52	120	1.14	
DTW (FEET)	5.64	3						the second s	1:16/	23010
DTB (ΓΕΕΤ)	21.03	4			No-1979aliliti (Malia) (Anno 1999), ann an Anna an Anna an Anna Anna Anna				ann a' agus charachair agus tharachain saonain	
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SAMPLE DATE	7/13	WEATHE	R CONDITI	ONS:			1999 in Adria in State Print, mar 200 m	n aantoo kana kana kana kana kana kana kana ka	teen ¹ 1 mont viill ajaaleetsi varteessa saata parte ruksoo	ад уулуу калар тараат оо ул 1999 а
DTW (FEET)	6.64	WATER A	PPEARAN	CE/ODOF	?:			, magni Cartalo - Carta an Ionganya (An ini aka Anangabaga gar anting nata ay yang	
SAMPLE TIME	13:45	COMME	VTS:		₩₩ ₩₩ ₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩	and a graph of the province of the state of	alaali a in kaala a	1995 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	The first of a solution for a solution suggests only the solution of the	
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WE	LL ID			, an	, , , , , , , , , , , , , , , , , , ,	TEST PAR	AMETERS			
WN	1W-5	Volumes	ТІМЕ	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	7/13	Initial	10:17	7.10	14.02	4.400	3.617-	3.03	0.36	-12.1
GAUGE TIME	9:56	1	10:20	7.10	14.08	4.384	3.566	3.01	0.34	-12-5
DHC (FEET)		2	10.23	7.10	14.12	2.393	3.588	3.00	0.32	-12.6
DTW (FEET)	7,42	3								
DTB (FEET)	20.14	4	**************************************				and a construction of a construction	*** ****** (* 172 kilo) felse en		,
		5								
CAPACITY PER	0.653 - 4"	6		and a second			mongrada, and date on the otherwidth date.	 mean of the statement of th	a	
FOOT	0.163 - 2"									
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SAMPLE DATE	7/13	WEATHE	R CONDIT	IONS:	, , , , , , , , , , , , , , , , , ,	Na C	Dellas e	− n a stypenter i string anger er en n er en ister	ala nan ala Sanata Santa S	949 at 60, de câmen e propres provinci a ser com
DTW (FEET)	7.42	WATER	APPEARAN	CE/ODOI	7: - 52	r ja				манат - т. с. — таца , — т.
SAMPLE TIME	10-25	COMME	NTS: PUP	+ FB	Ce//e	2. Ja J				
				(SAMPLE LOG	ที่สุขมางของที่มีรัฐของสาวส ⁵ รงสุขสาววร	ng kang pelanggalan penggalan penggalan p	un negative son negative son de la segui	Security of the contract contractory of the contract	Mantaon di manatara 2020g
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2022 ANNUAL GROUNDWATER SAMPLING WELL ID **TEST PARAMETERS** Temperature WMW-6 Conductivity Dissolved Volumes TIME pН TDS (g/L) Salinity (ppt) ORP (mv) Degrees (°C) (uS/m) Oxygen (mg/L) GAUGE DATE 2/13 Initial 8:47 6.42 1.085-0,962 C.Z. 10.7 0.99 -4.4 GAUGE TIME 8:15 1 6.43 0.962 6. 8-50 10.9 9 1.084 6.97 -4.1 DHC (FEET) Stope 1 2 6:57 6.48 11.2 1,081 0,为为口户 0.76 - 44 DTW (FEET) 13.14 3 UTB (FEET) 36,95 4 5 CAPACITY PER 0.653 - 4" 6 FOOT 0.163 - 2" SAMPLING DATA WEATHER CONDITIONS: SAMPLE DATE 13 7:5 Cleard Ç. WATER APPEARANCE / ODOR: DTW (FEET) 13.14 Cle_ No Ode-COMMENTS: 8:51 SAMPLE TIME SAMPLE LOG INSTRUMENTS USED OIL / WATER INTERFACE PROBE PERISTALTIC PUMP

WESTERN REFINING - GALLUP WINGATE FACILITY

FLOW THROUGH YSI PARAMETER METER COMPLETED BY: Hoilars Trejo

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WESTERN REFINING - GALLUP WINGATE FACILITY 2022 ANNUAL GROUNDWATER SAMPLING

WEI	LID					TEST PAF	AMETERS	a an		
WM	W-7	Volumes	TIME .	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	7/13	Initial	11:08	5.91	12-85	2-670	2.260	1.84	20.65	64.8
GAUGE TIME		1	11-11	5.91	12.71	2.655	2,210	1.84	26.69	66.1
DHC (FEET)	harrow	2	11-14	5.91	12.79	2.663	2.257	1,84	2058	670
DTW (FEET)	9,20	3								
DIB (FEET)	17.84	4					and the second			Челини — — — — — — — — — — — — — — — — — —
		5					· · · · · · · · · · · · · · · · · · ·	anger - try of monormaly		
CAPACITY PER	0.653 - 4"					1 ***		· · · · · · · ·	99	
FOOT	0.163 - 2"	6								
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SAMPLE DATE	2/13	WEATH	ER CONDIT	IONS:	29°4	- 1939-19 - Cologo and Col	1. Laid 2000 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010			an a
DTW (FEET)	9.2	WATER .	APPEARAN	CE/ODOI	R:	Osle -		 Malette provez energiese i si si calendaria 		
SAMPLE TIME	11+5	COMME	NTS:	fr Lat	, Te ~					
	1999 - Carlon Marian, 1999 - Carlon Marian, 1999 - Carlon	a ja puole auto anti anti anti anti anti anti anti anti			SAMPLE LOG	<u>1999 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995</u>	1922 C.		al fan regel fan 'dere is angegene regel oanen fan it fe	a na ta ƙasar (a sa
INSTRUMENT	'S USED	OIL / WA	ATER INTER	FACE PRO	DBE		<u>alay 11 no posta ang pada sa pada sa sa</u>	 - consideration of states and stat and states and sta	nen etter en ander en ander en andere en	an a
		PERISTA	LTIC PUMF)			a na	¹ • Philippane of Hermites and communic		in the second
		FLOW TH	IROUGH YS	SI PARAME	ETER METER				nen 1	
	COMPLE	TED BY:	Hila.	10 T	an 2	SIG	NATURE: <	76		

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WESTERN REFINING - GALLUP WINGATE FACILITY 2022 ANNUAL GROUNDWATER SAMPLING

WEL	L ID		an to a manada mini dal an manjangan			TEST PAP	RAMETERS			
WM	W-8	Volumes	TIME	pН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	7/12	Initial	12:04	7,62	13.7	0.29	643.5	0.49	B3	SZA
GAUGE TIME	11:22	1	12:08	7262	14.3	0.89	643.5	0.419	0.78	28.5
DHC (FEET)	4.200°B(1);7577-1-	2	12:13	7.63	14.3	0.98	632.0	0,47	6.82	62.0
DTW (FEET)	8.34	3	12:16	7.63	13.9	0.98	6320	0.49	0.98	58.0
DTB (FEET)	39.0	4	12:19	2.65	14.3	0.92		6.5		
		5					Children and Cartor P. Writerate		eren fra i faf somhann som ann sin som an sin s	n daar baar oo dhahar dhaha
CAPACITY PER	0.653 - 4"	6	9.120-1974 - 19-19-1974 - 19-297 - 19-297 - 29-29 19-19-1974 - 19-29	1994-00-00-00-00-00-00-00-00-00-00-00-00-00				. 86 V.C 60 Mg. 0.7	an a	and and a second of the
FOOT	0.163 - 2"									terretara en contecca da la como como co
	מינית ונובר, יידי לי הרפו געיר אומי אומי אומי אומי אומי איז איז איז איז איז איז איז איז איז אי	7412 2010 1010 1010 1010 1010 1010	9910 1020-1024 # 17396/17-2460.004 \$ 1500-000	SA	MPLING DA	TA			and and the second s	
SAMPLE DATE	7/12	WEATHI	ER CONDIT	IONS: ろー	ny.					
DTW (FEET)	8.34	WATER	APPEARAN	CE/ODOI	T: Martin S.	O.k-				
SAMPLE TIME	12:20	COMME	NTS:	anna marainn an ann an ghairtean an	n fa a garanta a sa a fa fa fa a fa a fa a fa a fa a	- 424 4 F F F F F F F F F F F F F F F F F			neering for an a framework and the second of a	
	ALE COMMUNICATION OF A COMUNICATION OF A COMUNICATIO			0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SAMPLE LOG			en i karansinan di memer	2001 I. M. CONSTRUCTION (1993)	and the second states of the
INSTRUMENT	INSTRUMENTS USED OIL / WATER INTERFACE PROBE							angenengikan denaristen die diffice paare of		
	11	PERISTA	ALTIC PUMP)				and a statement of the statement of the statement of		
		FLOW T	HROUGH Y	SI PARAME	ETER METER		and and all and a second second second second	an stille die Staale - 6 wegen	and a second state of the	
	COMPLE	TED BY:	۵۵۵۵۰۰۰۰، ۲۹۹۹ میلیدید. ۲۹۹۹ میلیومیسیمیسی ۱۹۹۹ میلیومیسیمیسیمیسی	2000 - 20		SI	GNATURE:			andraget games in a single of the same games in a solid state

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WESTERN REFINING - GALLUP WINGATE FACILITY 2022 ANNUAL GROUNDWATER SAMPLING

WE	LL ID			antiklik-opensja _{ns} organistis restriktiog	and and a second se	TEST PAF	AMETERS	8 0. 20. 1 93 ()	WELL ID TEST PARAMETERS							
WM	IW-9	Volumes	TIME	рН	Temperature Degrees (°C)	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved 0xygen (mg/L)	ORP (mv)						
GAUGE DATE	2/13	Initial	11:43	6.23	13,2	2.57	2.161	1.75	6.38	-188.5						
GAUGE TIME	11.30	1	11:46	6.22	13.2	2.461	2.163	1.75	6.35	-123.0						
DHC (FEET)	NA	2	11:49	6.22	13.1	2.587	2.159	1.75	0.35	-/91-0						
DTW (FEET)	7.71	3							-							
DIR (FFET)	15.31	4		9997999-0000-1-13990-9-999-1-13990												
		5					nadional and a second from the second se									
CAPACITY PER	0.653 - 4"	6					and 2	- colored and models and programmer and	an a	ana ana ao amin'ny faritr'i Ana ao amin'ny faritr'i Ana ao amin'ny faritr'i Ana ao amin'ny faritr'i Ana ao amin						
FOOT	0.163 - 2"				(/////////////////////////////////////											
				SA	MPLING DA	TA										
SAMPLE DATE	57/13	WEATHE	R CONDITI	Ions: land-	, . ,	30 ja	nangalanala na Tana da na da kana na ananana na manda na	n a metrik kan analasi bi dari yar ketu	97 - 97 - 97 - 98 - 98 - 98 - 99 - 99 -	999/4970-9979-9979-9979-997-997-997-99						
DTW (FEET)	7.71	WATER I	APPEARAN	CE/ODOF	r: led fine	5	науран — разла и слосо, ,		te a la constanta actual de la constanta							
SAMPLE TIME	11:50	COMME K	NTS: 101-2000	erson -	Idee c	Aler 1	Rect		- 1. Tiblana a inc. an Au	anton (
		and the second		C	SAMPLE LOG	99988855596679979299855	enter en	an sana ang mangangkan sa	a na an	an a						
INSTRUMENT	'S USED	OIL / WA	TER INTER	FACE PRO	BE			1999 - The State of Concerns of State of Concerns of State	an a							
		PERISTA	LTIC PUMP)												
		FLOW TH	IROUGH YS	SI PARAME	TER METER			100 CONTRACTOR (1)								
	COMPLE				>	010	NIA TRANS		· · · · · · · · · · · · · · · · · · ·	>						

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Appendix B. Laboratory Reports



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

August 01, 2022

Lesli Alexander Marathon 92 Giant Crossing Rd Gallup, NM 87301 TEL: (505) 722-3833 FAX:

RE: Wingate 2022 Annual Groundwater Sampling

OrderNo.: 2207654

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 13 sample(s) on 7/14/2022 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109



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

Case Narrative

WO#:	2207654
Date:	8/1/2022

CLIENT:	Marathon
Project:	Wingate 2022 Annual Groundwater Sampling

Analytical Notes Regarding EPA Method 8270:

"S" flags denote a surrogate or spike recovery outside of the standard limits.

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

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Date Reported: 8/1/2022

CLIENT:	Marathon		(Client Sample ID: WMW-8
Project:	Wingate 2022 Annual Groundwa	ter Sam		Collection Date: 7/12/2022 12:20:00 PM
Lab ID:	2207654-001	Matrix: (GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.013	0.00050		mg/L	1	7/20/2022 3:14:39 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	32	5.0		mg/L	10	7/14/2022 5:36:21 PM	R89511
Sulfate	180	5.0		mg/L	10	7/14/2022 5:36:21 PM	R89511
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/27/2022 5:33:06 PM	R89840
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	477.6	20.00		mg/L Ca	1	7/19/2022 2:37:00 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 2:37:00 PM	R89632
Total Alkalinity (as CaCO3)	477.6	20.00		mg/L Ca	1	7/19/2022 2:37:00 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	862	20.0	*	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
pH	7.96		н	pH units	1	7/19/2022 2:37:00 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 12:51:49 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 10:55:48 AM	A89895
Barium	0.13	0.020		mg/L	1	7/28/2022 10:55:48 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 10:55:48 AM	A89895
Calcium	34	1.0		mg/L	1	7/28/2022 10:55:48 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 10:55:48 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 10:55:48 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 10:55:48 AM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 10:55:48 AM	A89895
Sodium	280	5.0		mg/L	5	7/28/2022 12:59:59 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 4:23:59 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 4:23:59 PM	68843
Benzo(k)fluoranthene	ND	10		µg/L	1	7/21/2022 4:23:59 PM	68843

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

Qualifiers: * Value

* 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 interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range RL Reporting Limit

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2207654-001

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Analysis	Laboratory, Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-8

Collection Date: 7/12/2022 12:20:00 PM

Matrix: GROUNDWA -

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzoic acid	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
3,3'-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Fluoranthene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Fluorene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Isophorone	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Batch

	ť	U y			
CLIENT:	Marathon		Client Sample	ID: WMW-8	
Project:	Wingate 2022 Annual Groundv	vater Sam	Collection Da	nte: 7/12/2022 12:20:00 PM	
Lab ID:	2207654-001	Matrix: GROUNDW	WA Received Da	ate: 7/14/2022 9:35:00 AM	
Analyses		Result	RL Qual Units	DF Date Analyzed	Batch
EPA MET	HOD 8270C: SEMIVOLATILES			Analys	st: DAM

					7 (101)00	
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/21/2022 4:23:59 PM	68843
Phenanthrene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Phenol	ND	20	µg/L	1	7/21/2022 4:23:59 PM	68843
Pyrene	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Pyridine	ND	40	µg/L	1	7/21/2022 4:23:59 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 4:23:59 PM	68843
Surr: 2-Fluorophenol	65.4	29.4-87.7	%Rec	1	7/21/2022 4:23:59 PM	68843
Surr: Phenol-d5	50.9	28.5-64.7	%Rec	1	7/21/2022 4:23:59 PM	68843
Surr: 2,4,6-Tribromophenol	52.8	18.6-129	%Rec	1	7/21/2022 4:23:59 PM	68843
Surr: Nitrobenzene-d5	82.8	36.9-103	%Rec	1	7/21/2022 4:23:59 PM	68843
Surr: 2-Fluorobiphenyl	74.6	38.1-99.9	%Rec	1	7/21/2022 4:23:59 PM	68843
Surr: 4-Terphenyl-d14	102	48-155	%Rec	1	7/21/2022 4:23:59 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst	: JR
Benzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Toluene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Naphthalene	ND	2.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 4:17:48 PM	R89550

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

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 4 of 77

2207654-001

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-8

Collection Date: 7/12/2022 12:20:00 PM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Acetone	ND	10	µg/L	1	7/15/2022 4:17:48 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 4:17:48 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 4:17:48 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,3-Dichloropropane	ND	1.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
2,2-Dichloropropane	ND	2.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
1,1-Dichloropropene	ND	1.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
Hexachlorobutadiene	ND	1.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
2-Hexanone	ND	10	μg/L	1	7/15/2022 4:17:48 PM	R89550
Isopropylbenzene	ND	1.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
4-Isopropyltoluene	ND	1.0	μg/L	1	7/15/2022 4:17:48 PM	R89550
4-Methyl-2-pentanone	ND	10	μg/L	1	7/15/2022 4:17:48 PM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 5 of 77

2207654-001

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Analysis Laboratory, Inc.
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Client Sample ID: WMW-8

Collection Date: 7/12/2022 12:20:00 PM

Wingate 2022 Annual Groundwater Sam

Matrix: GROUNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
Styrene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/15/2022 4:17:48 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 4:17:48 PM	R89550
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	7/15/2022 4:17:48 PM	R89550
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	1	7/15/2022 4:17:48 PM	R89550
Surr: Dibromofluoromethane	122	70-130	%Rec	1	7/15/2022 4:17:48 PM	R89550
Surr: Toluene-d8	104	70-130	%Rec	1	7/15/2022 4:17:48 PM	R89550

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		Client Sam	nple ID: WMW-3	
Project:	Wingate 2022 Annual Groundwate	er Sam	Collection	n Date: 7/12/2022	1:23:00 PM
Lab ID:	2207654-002	Matrix: GROUNDWA	Receive	d Date: 7/14/2022	9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.054	0.0025	*	mg/L	5	7/21/2022 12:41:31 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	1300	50	*	mg/L	100	7/14/2022 6:14:57 PM	R89511
Sulfate	2400	50	*	mg/L	100	7/14/2022 6:14:57 PM	R89511
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/27/2022 5:45:58 PM	R89840
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	1061	20.00		mg/L Ca	1	7/19/2022 2:56:01 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 2:56:01 PM	R89632
Total Alkalinity (as CaCO3)	1061	20.00		mg/L Ca	1	7/19/2022 2:56:01 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	6700	200	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.76		н	pH units	1	7/19/2022 2:56:01 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 12:53:57 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 10:59:06 AM	A89895
Barium	0.043	0.020		mg/L	1	7/28/2022 10:59:06 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 10:59:06 AM	A89895
Calcium	170	5.0		mg/L	5	7/28/2022 1:03:11 PM	A89895
Chromium	0.0063	0.0060		mg/L	1	7/28/2022 10:59:06 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 10:59:06 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 10:59:06 AM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 10:59:06 AM	A89895
Sodium	2100	50		mg/L	50	7/28/2022 1:15:08 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843
Benzo(k)fluoranthene	ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843

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

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL

Reporting Limit

Page 7 of 77

2-Chloronaphthalene

68843

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Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

7/21/2022 5:06:53 PM

CLIENT: Project:	Marathon Wingate 2022 Annual Groundwa	iter Sam		Cl (ient Sa Collect	mple I ion Dat	D: W] t e: 7/1	MW-3 2/2022 1:23:00 PM	
Lab ID:	2207654-002	Matrix:	GROUN	IDWA	Receiv	ed Dat	t e: 7/1	4/2022 9:35:00 AM	
Analyses		Re	sult	RL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8270C: SEMIVOLATILES							Analyst	DAM
Benzoic	acid		ND	20		µg/L	1	7/21/2022 5:06:53 PM	68843
Benzyl a	Icohol		ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843
Bis(2-chl	oroethoxy)methane		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Bis(2-chl	oroethyl)ether		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Bis(2-chl	oroisopropyl)ether		ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843
Bis(2-eth	ylhexyl)phthalate		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
4-Bromo	phenyl phenyl ether		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Butyl ber	nzyl phthalate		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
Carbazol	le		ND	10		µg/L	1	7/21/2022 5:06:53 PM	68843
4-Chloro	-3-methylphenol		ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843
4-Chloro	aniline		ND	5.0		µg/L	1	7/21/2022 5:06:53 PM	68843

ND

10

µg/L

1

2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Chrysene	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 5:06:53 PM
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Dibenzofuran	ND	10	µg/L	1	7/21/2022 5:06:53 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 5:06:53 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
2,4-Dimethylphenol	ND	10	μg/L	1	7/21/2022 5:06:53 PM
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 5:06:53 PM
2,4-Dinitrophenol	ND	20	μg/L	1	7/21/2022 5:06:53 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
2,6-Dinitrotoluene	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Fluoranthene	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Fluorene	ND	10	μg/L	1	7/21/2022 5:06:53 PM
Hexachlorobenzene	ND	20	µg/L	1	7/21/2022 5:06:53 PM

ND

ND

ND

ND

ND

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

Hall Environmental Analysis Laboratory, Inc.

Е Estimated value J Analyte detected below quantitation limits

µg/L

µg/L

µg/L

µg/L

µg/L

1

1

1

1

1

Analyte detected in the associated Method Blank

Р Sample pH Not In Range

RL Reporting Limit

в

20

20

20

10

5.0

Page 8 of 77

PQL Practical Quanitative Limit % Recovery outside of range due to dilution or matrix interference S

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

Sample Diluted Due to Matrix

Not Detected at the Reporting Limit

Released to Imaging: 10/17/2022 1:22:39 PM

Hexachlorobutadiene

Indeno(1,2,3-cd)pyrene

Hexachloroethane

Isophorone

Qualifiers:

Hexachlorocyclopentadiene

*

D

Н

ND

2-Nitroaniline

3-Nitroaniline

4-Nitroaniline

Nitrobenzene

2-Nitrophenol

4-Nitrophenol

Phenanthrene

Phenol

Pyrene

Pentachlorophenol

Batch

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R89550

JR

Analytical Report Lab Order 2207654

7/21/2022 5:06:53 PM

7/15/2022 5:44:33 PM

Hall En	Hall Environmental Analysis Laboratory, Inc.						Date Reported: 8/1/2022	2
CLIENT: Marathon Client Sam					ient Sample I	D:W	MW-3	
Project:	Wingate 2022 Annual Ground	lwater Sam		(Collection Da	te: 7/1	2/2022 1:23:00 PM	
Lab ID:	2207654-002	Matrix:	GROUN	DWA	Received Da	te: 7/1	4/2022 9:35:00 AM	
Analyses		R	esult	RL	Qual Units	DF	Date Analyzed	Batcl
EPA MET	HOD 8270C: SEMIVOLATILE	S					Analyst:	DAM
1-Methylr	naphthalene		ND	5.0	µg/L	1	7/21/2022 5:06:53 PM	68843
2-Methylr	naphthalene		ND	5.0	µg/L	1	7/21/2022 5:06:53 PM	68843
2-Methylp	phenol		ND	10	µg/L	1	7/21/2022 5:06:53 PM	68843
3+4-Meth	ylphenol		ND	10	µg/L	1	7/21/2022 5:06:53 PM	68843
N-Nitroso	odi-n-propylamine		ND	5.0	µg/L	1	7/21/2022 5:06:53 PM	68843
N-Nitroso	odimethylamine		ND	5.0	µg/L	1	7/21/2022 5:06:53 PM	68843
N-Nitroso	odiphenylamine		ND	10	µg/L	1	7/21/2022 5:06:53 PM	68843
Naphthal	ene		ND	5.0	µg/L	1	7/21/2022 5:06:53 PM	68843

ND

2,4,6-Trichlorophenol	1
Surr: 2-Fluorophenol	40
Surr: Phenol-d5	42

Pyridine	ND	40	µg/L	1	7/21/2022 5:06:53 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:06:53 PM
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 5:06:53 PM
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 5:06:53 PM
Surr: 2-Fluorophenol	40.0	29.4-87.7	%Rec	1	7/21/2022 5:06:53 PM
Surr: Phenol-d5	42.5	28.5-64.7	%Rec	1	7/21/2022 5:06:53 PM
Surr: 2,4,6-Tribromophenol	16.3	18.6-129	S %Rec	1	7/21/2022 5:06:53 PM
Surr: Nitrobenzene-d5	80.2	36.9-103	%Rec	1	7/21/2022 5:06:53 PM
Surr: 2-Fluorobiphenyl	74.1	38.1-99.9	%Rec	1	7/21/2022 5:06:53 PM
Surr: 4-Terphenyl-d14	99.3	48-155	%Rec	1	7/21/2022 5:06:53 PM
EPA METHOD 8260B: VOLATILES					Analyst:
Benzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM
Toluene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM

ND

ND

ND

ND

ND

ND

ND

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

10

10

5.0

5.0

10

10

40

10

20

10

1.0

1.0

1.0

1.0

1.0

2.0

4.0

µg/L

1

1

1

1

1

1

1

1

1

1

-

В Analyte detected in the associated Method Blank Е Estimated value

µg/L

µg/L

µg/L

µg/L

µg/L

µg/L

µg/L

1

1

1

1

1

1

1

Р

Not Detected at the Reporting Limit Practical Quanitative Limit

Sample Diluted Due to Matrix

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

PQL % Recovery outside of range due to dilution or matrix interference S

J Analyte detected below quantitation limits

Sample pH Not In Range RL Reporting Limit

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Released to Imaging: 10/17/2022 1:22:39 PM

Methyl tert-butyl ether (MTBE)

1,2,4-Trimethylbenzene

1,3,5-Trimethylbenzene

1,2-Dichloroethane (EDC)

1,2-Dibromoethane (EDB)

*

D

Н

ND

1-Methylnaphthalene

Naphthalene

Qualifiers:

2207654-002

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory, I	nc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-3

Collection Date: 7/12/2022 1:23:00 PM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Acetone	ND	10	µg/L	1	7/15/2022 5:44:33 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 5:44:33 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 5:44:33 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
2-Hexanone	ND	10	µg/L	1	7/15/2022 5:44:33 PM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/15/2022 5:44:33 PM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Batch

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		C	lient S	ample I	D: W	MW-3	
Project:	Wingate 2022 Annual Groundy	vater Sam		Collec	tion Dat	t e: 7/1	12/2022 1:23:00	PM
Lab ID:	2207654-002	Matrix: GROUNDW	VA	Rece	ived Dat	t e: 7 /1	14/2022 9:35:00	AM
Analyses		Result	RI	, Qua	Units	DF	Date Analyzed	Bat
EPA MET	HOD 8260B: VOLATILES						A	nalyst: JR

					-	
Styrene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/15/2022 5:44:33 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 5:44:33 PM	R89550
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	7/15/2022 5:44:33 PM	R89550
Surr: 4-Bromofluorobenzene	110	70-130	%Rec	1	7/15/2022 5:44:33 PM	R89550
Surr: Dibromofluoromethane	120	70-130	%Rec	1	7/15/2022 5:44:33 PM	R89550
Surr: Toluene-d8	99.7	70-130	%Rec	1	7/15/2022 5:44:33 PM	R89550

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
- Н 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 interference
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon			Client Sample ID: WMW-6
Project:	Wingate 2022 Annual Groundwat	er Sam		Collection Date: 7/13/2022
Lab ID:	2207654-003	Matrix:	GROUNDWA	Received Date: 7/14/2022

2022 8:55:00 AM

2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.0090	0.00050		mg/L	1	7/20/2022 3:19:32 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	ЈМТ
Chloride	65	5.0		mg/L	10	7/14/2022 6:27:50 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 6:27:50 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 6:27:50 PM	R89511
Sulfate	320	5.0	*	mg/L	10	7/14/2022 6:27:50 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	446.6	20.00		mg/L Ca	1	7/19/2022 3:32:40 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 3:32:40 PM	R89632
Total Alkalinity (as CaCO3)	446.6	20.00		mg/L Ca	1	7/19/2022 3:32:40 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	KS
Total Dissolved Solids	1040	20.0	*	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.99		Н	pH units	1	7/19/2022 3:32:40 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 12:56:06 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 11:02:36 AM	A89895
Barium	0.034	0.020		mg/L	1	7/28/2022 11:02:36 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:02:36 AM	A89895
Calcium	36	1.0		mg/L	1	7/28/2022 11:02:36 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:02:36 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:02:36 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 11:02:36 AM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:02:36 AM	A89895
Sodium	340	5.0		mg/L	5	7/28/2022 1:18:23 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 5:51:03 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 5:51:03 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 5:51:03 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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2207654-003

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental	Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-6

Collection Date: 7/13/2022 8:55:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Benzoic acid	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4-Dimethylphenol	ND	10	μg/L	1	7/21/2022 5:51:03 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4-Dinitrotoluene	ND	5.0	μg/L	1	7/21/2022 5:51:03 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Fluoranthene	ND	10	μg/L	1	7/21/2022 5:51:03 PM	68843
Fluorene	ND	10	μg/L	1	7/21/2022 5:51:03 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Sample pH Not In Range

Р RL Reporting Limit

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2207654-003

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Analysis Laboratory, Inc.	
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-6

Collection Date: 7/13/2022 8:55:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst:	DAM
Isophorone	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/21/2022 5:51:03 PM	68843
Phenanthrene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Phenol	ND	20	µg/L	1	7/21/2022 5:51:03 PM	68843
Pyrene	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Pyridine	ND	40	µg/L	1	7/21/2022 5:51:03 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 5:51:03 PM	68843
Surr: 2-Fluorophenol	61.2	29.4-87.7	%Rec	1	7/21/2022 5:51:03 PM	68843
Surr: Phenol-d5	44.9	28.5-64.7	%Rec	1	7/21/2022 5:51:03 PM	68843
Surr: 2,4,6-Tribromophenol	74.1	18.6-129	%Rec	1	7/21/2022 5:51:03 PM	68843
Surr: Nitrobenzene-d5	75.9	36.9-103	%Rec	1	7/21/2022 5:51:03 PM	68843
Surr: 2-Fluorobiphenyl	68.9	38.1-99.9	%Rec	1	7/21/2022 5:51:03 PM	68843
Surr: 4-Terphenyl-d14	106	48-155	%Rec	1	7/21/2022 5:51:03 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Benzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Toluene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	7/15/2022 6:13:28 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	7/15/2022 6:13:28 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	7/15/2022 6:13:28 PM	R89550
Naphthalene	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 14 of 77

2207654-003

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Ar	alysis Laboratory, Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-6

Collection Date: 7/13/2022 8:55:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL Ç	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
1-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Acetone	ND	10	µg/L	1	7/15/2022 6:13:28 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 6:13:28 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 6:13:28 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
2-Hexanone	ND	10	µg/L	1	7/15/2022 6:13:28 PM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
4-Methyl-2-pentanone	ND	10	μg/L	1	7/15/2022 6:13:28 PM	R89550
Methylene Chloride	ND	3.0	μg/L	1	7/15/2022 6:13:28 PM	R89550
n-Butylbenzene	ND	3.0	μg/L	1	7/15/2022 6:13:28 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550

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

* **Qualifiers:**

D Sample Diluted Due to Matrix

Value exceeds Maximum Contaminant Level. Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit Page 15 of 77

Hall Environmental Analysis Laboratory, Inc.

Batch

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Analyses		Re	sult	RL	Qual	Units	DF Date	Analyzed
Lab ID:	2207654-003	Matrix:	GROUND	NA	Receiv	ed Dat	e: 7/14/2022	2 9:35:00 AM
Project:	Wingate 2022 Annual Gro	undwater Sam			Collecti	on Dat	e: 7/13/2022	2 8:55:00 AM
CLIENT:	Marathon			C	lient Sa	mple II	D: WMW-6	

EPA METHOD 8260B: VOLATILES					Analyst	JR
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Styrene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/15/2022 6:13:28 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 6:13:28 PM	R89550
Surr: 1,2-Dichloroethane-d4	115	70-130	%Rec	1	7/15/2022 6:13:28 PM	R89550
Surr: 4-Bromofluorobenzene	111	70-130	%Rec	1	7/15/2022 6:13:28 PM	R89550
Surr: Dibromofluoromethane	124	70-130	%Rec	1	7/15/2022 6:13:28 PM	R89550
Surr: Toluene-d8	98.9	70-130	%Rec	1	7/15/2022 6:13:28 PM	R89550

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT: Marathon **Client Sample ID: WMW-1R Project:** Wingate 2022 Annual Groundwater Sam 2207654-004 Lab ID: Matrix: GROUNDWA

Collection Date: 7/13/2022 9:40:00 AM

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.029	0.0025		mg/L	5	7/21/2022 12:43:57 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	ЈМТ
Chloride	460	50	*	mg/L	100) 7/14/2022 7:32:13 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 7:19:20 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 7:19:20 PM	R89511
Sulfate	1700	50	*	mg/L	100) 7/14/2022 7:32:13 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	755.1	20.00		mg/L Ca	1	7/19/2022 3:50:51 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 3:50:51 PM	R89632
Total Alkalinity (as CaCO3)	755.1	20.00		mg/L Ca	1	7/19/2022 3:50:51 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	3760	100	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.48		н	pH units	1	7/19/2022 3:50:51 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 12:58:15 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	0.023	0.020		mg/L	1	7/28/2022 11:05:54 AM	A89895
Barium	0.070	0.020		mg/L	1	7/28/2022 11:05:54 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:05:54 AM	A89895
Calcium	340	10		mg/L	10	7/28/2022 1:21:36 PM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:05:54 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:05:54 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 11:05:54 AM	A89895
Silver	0.0065	0.0050		mg/L	1	7/28/2022 11:05:54 AM	A89895
Sodium	900	10		mg/L	10	7/28/2022 1:21:36 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 6:36:00 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 6:36:00 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 6:36:00 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Batch

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon			C	lient Sa	ample I	D: W	MW-1R		
Project:	Wingate 2022 Annual Groundwa	ter Sam			Collect	ion Dat	e: 7/1	3/2022 9:4	0:00 AM	
Lab ID:	2207654-004	Matrix:	GROUND	VA	Receiv	ved Dat	e: 7/1	4/2022 9:3	5:00 AM	
Analyses		R	esult	RL	Qual	Units	DF	Date Anal	yzed	Batch
EPA MET	HOD 8270C: SEMIVOLATILES								Analyst	DAM
Benzo(k)	fluoranthene			10		ua/l	1	7/21/2022	8-36-00 PM	68843

Benzo(k)fluoranthene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Benzoic acid	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Fluoranthene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Fluorene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits Р Sample pH Not In Range
- RL Reporting Limit

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Batch

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Er	vironmental Analysis	Labora	tory, Inc.	•		Date Reported: 8/1/20
CLIENT:	Marathon			С	lient Sample I	D: WMW-1R
Project:	Wingate 2022 Annual Groundwa	ater Sam			Collection Da	te: 7/13/2022 9:40:00 AM
Lab ID:	2207654-004	Matrix:	GROUNDW	A	Received Da	te: 7/14/2022 9:35:00 AM
Analyses		R	esult	RL	Qual Units	DF Date Analyzed

EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Isophorone	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/21/2022 6:36:00 PM	68843
Phenanthrene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Phenol	ND	20	µg/L	1	7/21/2022 6:36:00 PM	68843
Pyrene	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Pyridine	ND	40	µg/L	1	7/21/2022 6:36:00 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 6:36:00 PM	68843
Surr: 2-Fluorophenol	40.2	29.4-87.7	%Rec	1	7/21/2022 6:36:00 PM	68843
Surr: Phenol-d5	40.1	28.5-64.7	%Rec	1	7/21/2022 6:36:00 PM	68843
Surr: 2,4,6-Tribromophenol	19.8	18.6-129	%Rec	1	7/21/2022 6:36:00 PM	68843
Surr: Nitrobenzene-d5	69.4	36.9-103	%Rec	1	7/21/2022 6:36:00 PM	68843
Surr: 2-Fluorobiphenyl	62.8	38.1-99.9	%Rec	1	7/21/2022 6:36:00 PM	68843
Surr: 4-Terphenyl-d14	94.3	48-155	%Rec	1	7/21/2022 6:36:00 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst	: JR
Benzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
Toluene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550
Naphthalene	ND	2.0	µg/L	1	7/15/2022 6:42:19 PM	R89550

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

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT: Marathon		Client Sample ID: WMW-1R						
Project: Wingate 2022 Annual Ground	water Sam	Collection Date: 7/13/2022 9:40:00 AM						
Lab ID: 2207654-004	Matrix: GROUNDW	A	Receive	ed Dat	e: 7/1	4/2022 9:35:00 AM		
Analyses	Result	RL	Qual U	U nits	DF	Date Analyzed	Batch	
EPA METHOD 8260B: VOLATILES						Analyst	JR	
1-Methylnaphthalene	ND	4.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
2-Methylnaphthalene	ND	4.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Acetone	ND	10	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Bromobenzene	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Bromodichloromethane	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Bromoform	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Bromomethane	ND	3.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
2-Butanone	ND	10	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Carbon disulfide	ND	10	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Carbon Tetrachloride	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Chlorobenzene	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Chloroethane	ND	2.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Chloroform	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Chloromethane	ND	3.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
2-Chlorotoluene	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
4-Chlorotoluene	ND	1.0	ł	ug/L	1	7/15/2022 6:42:19 PM	R89550	
cis-1,2-DCE	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
cis-1,3-Dichloropropene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,2-Dibromo-3-chloropropane	ND	2.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Dibromochloromethane	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
Dibromomethane	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,2-Dichlorobenzene	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,3-Dichlorobenzene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,4-Dichlorobenzene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
Dichlorodifluoromethane	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,1-Dichloroethane	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,1-Dichloroethene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,2-Dichloropropane	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,3-Dichloropropane	ND	1.0	ŀ	ug/L	1	7/15/2022 6:42:19 PM	R89550	
2,2-Dichloropropane	ND	2.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
1,1-Dichloropropene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
Hexachlorobutadiene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
2-Hexanone	ND	10		ug/L	1	7/15/2022 6:42:19 PM	R89550	
Isopropylbenzene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
4-Isopropyltoluene	ND	1.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	
4-Methyl-2-pentanone	ND	10		ug/L	1	7/15/2022 6:42:19 PM	R89550	
Methylene Chloride	ND	3.0		ug/L	1	7/15/2022 6:42:19 PM	R89550	

Hall Environmental Analysis Laboratory, Inc.

1

1

В Е

3.0

1.0

ND

ND

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

Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded

Н ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Value exceeds Maximum Contaminant Level.

Analyte detected in the associated Method Blank Estimated value

J Analyte detected below quantitation limits

µg/L

µg/L

Р Sample pH Not In Range

RL Reporting Limit Page 20 of 77

R89550

R89550

7/15/2022 6:42:19 PM

7/15/2022 6:42:19 PM

*

D

n-Butylbenzene

n-Propylbenzene

Qualifiers:

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT: Marathon	Client Sample ID: WMW-1R								
Project: Wingate 2022 Annual Ground	lwater Sam	n Collection Date: 7/13/2022 9:40:00 AM							
Lab ID: 2207654-004	Matrix: GROUNDWA		Received Dat	te: 7/1	4/2022 9:35:00 AM				
Analyses	Result R	٢L	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 8260B: VOLATILES					Analyst:	JR			
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
Styrene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
1,1,2,2-Tetrachloroethane	ND 2	2.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
trans-1,2-DCE	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
1,2,3-Trichlorobenzene	ND ·	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
1,1,1-Trichloroethane	ND ·	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			
1,1,2-Trichloroethane	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
Trichloroethene (TCE)	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
Trichlorofluoromethane	ND	1.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
1,2,3-Trichloropropane	ND 2	2.0	μg/L	1	7/15/2022 6:42:19 PM	R89550			
Vinyl chloride	ND ·	1.0	µg/L	1	7/15/2022 6:42:19 PM	R89550			

ND

112

108

121

102

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

Xylenes, Total

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit
- ND Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix interference S
- Analyte detected in the associated Method Blank в
- Е Estimated value
- J Analyte detected below quantitation limits

µg/L

%Rec

%Rec

%Rec

%Rec

1

1

1

1

1

7/15/2022 6:42:19 PM

R89550

R89550

R89550

R89550

R89550

1.5

70-130

70-130

70-130

70-130

- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		Client Sample ID: WMW-5
Project:	Wingate 2022 Annual Groundwa	ter Sam	Collection Date: 7/13/2022 10:25:00 AM
Lab ID:	2207654-005	Matrix: GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.021	0.00050		mg/L	1	7/20/2022 3:29:19 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	450	50	*	mg/L	100	7/14/2022 7:57:58 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 7:45:05 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 7:45:05 PM	R89511
Sulfate	2200	50	*	mg/L	100	7/14/2022 7:57:58 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	717.6	20.00		mg/L Ca	1	7/19/2022 4:22:47 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 4:22:47 PM	R89632
Total Alkalinity (as CaCO3)	717.6	20.00		mg/L Ca	1	7/19/2022 4:22:47 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	4170	40.0	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.47		Н	pH units	1	7/19/2022 4:22:47 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:00:24 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 11:09:22 AM	A89895
Barium	ND	0.020		mg/L	1	7/28/2022 11:09:22 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:09:22 AM	A89895
Calcium	220	5.0		mg/L	5	7/28/2022 1:24:39 PM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:09:22 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:09:22 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 11:09:22 AM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:09:22 AM	A89895
Sodium	1200	50		mg/L	50	7/28/2022 1:27:50 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit Page 22 of 77

2207654-005

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Analysis Laboratory, Inc.	
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-5

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

JNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Benzoic acid	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 7:20:08 PM	68843
2,4-Dimethylphenol	ND	10	μg/L	1	7/21/2022 7:20:08 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
2,4-Dinitrotoluene	ND	5.0	μg/L	1	7/21/2022 7:20:08 PM	68843
2,6-Dinitrotoluene	ND	10	μg/L	1	7/21/2022 7:20:08 PM	68843
Fluoranthene	ND	10	μg/L	1	7/21/2022 7:20:08 PM	68843
Fluorene	ND	10	μg/L	1	7/21/2022 7:20:08 PM	68843
Hexachlorobenzene	ND	20	μg/L	1	7/21/2022 7:20:08 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 7:20:08 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 7:20:08 PM	68843

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 interference

- B Analyte detected in the associated Method Blank
- E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range RL Reporting Limit

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Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

-		-	-	
CLIENT:	Marathon			Client Sample ID: WMW-5
Project:	Wingate 2022 Ann	ual Groundwater Sam		Collection Date: 7/13/202
Lab ID:	2207654-005	Matrix:	GROUNDWA	Received Date: 7/14/202

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: WMW-5	
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22 10:25:00 AM

22 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Isophorone	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
1-Methylnaphthalene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
2-Methylnaphthalene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
2-Methylphenol	ND	10		μg/L	1	7/21/2022 7:20:08 PM	68843
3+4-Methylphenol	ND	10		μg/L	1	7/21/2022 7:20:08 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
N-Nitrosodimethylamine	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Naphthalene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
2-Nitroaniline	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
3-Nitroaniline	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
4-Nitroaniline	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
Nitrobenzene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
2-Nitrophenol	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
4-Nitrophenol	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Pentachlorophenol	ND	40		µg/L	1	7/21/2022 7:20:08 PM	68843
Phenanthrene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Phenol	ND	20		µg/L	1	7/21/2022 7:20:08 PM	68843
Pyrene	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Pyridine	ND	40		µg/L	1	7/21/2022 7:20:08 PM	68843
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	7/21/2022 7:20:08 PM	68843
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/21/2022 7:20:08 PM	68843
Surr: 2-Fluorophenol	45.9	29.4-87.7		%Rec	1	7/21/2022 7:20:08 PM	68843
Surr: Phenol-d5	45.0	28.5-64.7		%Rec	1	7/21/2022 7:20:08 PM	68843
Surr: 2,4,6-Tribromophenol	12.7	18.6-129	S	%Rec	1	7/21/2022 7:20:08 PM	68843
Surr: Nitrobenzene-d5	81.0	36.9-103		%Rec	1	7/21/2022 7:20:08 PM	68843
Surr: 2-Fluorobiphenyl	75.2	38.1-99.9		%Rec	1	7/21/2022 7:20:08 PM	68843
Surr: 4-Terphenyl-d14	106	48-155		%Rec	1	7/21/2022 7:20:08 PM	68843
EPA METHOD 8260B: VOLATILES						Analyst:	JR
Benzene	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
Toluene	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
Ethylbenzene	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/15/2022 7:11:12 PM	R89550
Naphthalene	ND	2.0		µg/L	1	7/15/2022 7:11:12 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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2207654-005

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental A	Analysis	Laboratory, Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-5

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
1-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Acetone	ND	10	µg/L	1	7/15/2022 7:11:12 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 7:11:12 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 7:11:12 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
2-Hexanone	ND	10	µg/L	1	7/15/2022 7:11:12 PM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/15/2022 7:11:12 PM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550

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

* **Qualifiers:**

D Sample Diluted Due to Matrix

Value exceeds Maximum Contaminant Level. Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 25 of 77

2207654-005

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental	Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-5

Collection Date: 7/13/2022 10:25:00 AM

Received Date: 7/14/2022 9:35:00 AM Matrix: GROUNDWA

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	JR
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Styrene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/15/2022 7:11:12 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 7:11:12 PM	R89550
Surr: 1,2-Dichloroethane-d4	115	70-130	%Rec	1	7/15/2022 7:11:12 PM	R89550
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	1	7/15/2022 7:11:12 PM	R89550
Surr: Dibromofluoromethane	121	70-130	%Rec	1	7/15/2022 7:11:12 PM	R89550
Surr: Toluene-d8	101	70-130	%Rec	1	7/15/2022 7:11:12 PM	R89550

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL
 - Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		(Cl	lient Sample ID: WMW-7
Project:	Wingate 2022 Annual Groundwat	ter Sam		•	Collection Date: 7/13/2022 11:15:00 AM
Lab ID:	2207654-006	Matrix:	GROUNDWA		Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.026	0.0025		mg/L	5	7/21/2022 12:46:24 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	200	50		mg/L	100	7/14/2022 8:23:42 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 8:10:50 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 8:10:50 PM	R89511
Sulfate	1100	50	*	mg/L	100	7/14/2022 8:23:42 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	692.4	20.00		mg/L Ca	1	7/19/2022 4:50:17 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 4:50:17 PM	R89632
Total Alkalinity (as CaCO3)	692.4	20.00		mg/L Ca	1	7/19/2022 4:50:17 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	2530	40.0	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	8.27		Н	pH units	1	7/19/2022 4:50:17 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:02:34 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 11:21:23 AM	A89895
Barium	0.021	0.020		mg/L	1	7/28/2022 11:21:23 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:21:23 AM	A89895
Calcium	25	1.0		mg/L	1	7/28/2022 11:21:23 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:21:23 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:21:23 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 2:25:06 PM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:21:23 AM	A89895
Sodium	880	10		mg/L	10	7/28/2022 1:31:02 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 8:03:35 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 8:03:35 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 8:03:35 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon			Client Sample ID: WMW-7
Project:	Wingate 2022 Annua	l Groundwater Sam		Collection Date: 7/13/2022 11:15:00 AM
Lab ID:	2207654-006	Matrix:	GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Hall Environmental Analysis Laboratory, Inc.

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst:	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Benzoic acid	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Fluoranthene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Fluorene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range RL Reporting Limit
- Page 28 of 77

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Released to Imaging: 10/17/2022 1:22:39 PM

2207654-006

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-7

Collection Date: 7/13/2022 11:15:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst:	DAM
Isophorone	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 8:03:35 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 8:03:35 PM	68843
N-Nitrosodimethylamine	ND	5.0	μg/L	1	7/21/2022 8:03:35 PM	68843
N-Nitrosodiphenylamine	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
Naphthalene	ND	5.0	μg/L	1	7/21/2022 8:03:35 PM	68843
2-Nitroaniline	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
3-Nitroaniline	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
4-Nitroaniline	ND	5.0	μg/L	1	7/21/2022 8:03:35 PM	68843
Nitrobenzene	ND	5.0	μg/L	1	7/21/2022 8:03:35 PM	68843
2-Nitrophenol	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
4-Nitrophenol	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
Pentachlorophenol	ND	40	μg/L	1	7/21/2022 8:03:35 PM	68843
Phenanthrene	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
Phenol	ND	20	µg/L	1	7/21/2022 8:03:35 PM	68843
Pyrene	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
Pyridine	ND	40	μg/L	1	7/21/2022 8:03:35 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	μg/L	1	7/21/2022 8:03:35 PM	68843
2,4,5-Trichlorophenol	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
2,4,6-Trichlorophenol	ND	10	μg/L	1	7/21/2022 8:03:35 PM	68843
Surr: 2-Fluorophenol	59.5	29.4-87.7	%Rec	1	7/21/2022 8:03:35 PM	68843
Surr: Phenol-d5	45.5	28.5-64.7	%Rec	1	7/21/2022 8:03:35 PM	68843
Surr: 2,4,6-Tribromophenol	64.4	18.6-129	%Rec	1	7/21/2022 8:03:35 PM	68843
Surr: Nitrobenzene-d5	77.4	36.9-103	%Rec	1	7/21/2022 8:03:35 PM	68843
Surr: 2-Fluorobiphenyl	70.0	38.1-99.9	%Rec	1	7/21/2022 8:03:35 PM	68843
Surr: 4-Terphenyl-d14	101	48-155	%Rec	1	7/21/2022 8:03:35 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Benzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Toluene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Naphthalene	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL

Reporting Limit

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2207654-006

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-7

Collection Date: 7/13/2022 11:15:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
1-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Acetone	ND	10	µg/L	1	7/15/2022 7:40:01 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 7:40:01 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 7:40:01 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
2-Hexanone	ND	10	µg/L	1	7/15/2022 7:40:01 PM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/15/2022 7:40:01 PM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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2207654-006

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-7

Collection Date: 7/13/2022 11:15:00 AM

Received Date: 7/14/2022 9:35:00 AM Matrix: GROUNDWA

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Styrene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/15/2022 7:40:01 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 7:40:01 PM	R89550
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	7/15/2022 7:40:01 PM	R89550
Surr: 4-Bromofluorobenzene	107	70-130	%Rec	1	7/15/2022 7:40:01 PM	R89550
Surr: Dibromofluoromethane	120	70-130	%Rec	1	7/15/2022 7:40:01 PM	R89550
Surr: Toluene-d8	102	70-130	%Rec	1	7/15/2022 7:40:01 PM	R89550

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		Client Sample ID: WMW-9
Project:	Wingate 2022 Annual Groundwar	ter Sam	Collection Date: 7/13/2022 11:50:00 AM
Lab ID:	2207654-007	Matrix: GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.0048	0.00050		mg/L	1	7/20/2022 3:34:12 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	380	50	*	mg/L	100) 7/14/2022 8:49:25 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 8:36:33 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 8:36:33 PM	R89511
Sulfate	19	5.0		mg/L	10	7/14/2022 8:36:33 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	1376	50.00	н	mg/L Ca	2.5	7/28/2022 2:22:11 PM	R89866
Carbonate (As CaCO3)	ND	5.000	Н	mg/L Ca	2.5	7/28/2022 2:22:11 PM	R89866
Total Alkalinity (as CaCO3)	1376	50.00	н	mg/L Ca	2.5	7/28/2022 2:22:11 PM	R89866
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	2420	200	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	8.09		Н	pH units	1	7/19/2022 5:15:21 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:04:44 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	0.027	0.020		mg/L	1	7/28/2022 11:24:37 AM	A89895
Barium	0.87	0.020		mg/L	1	7/28/2022 11:24:37 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:24:37 AM	A89895
Calcium	20	1.0		mg/L	1	7/28/2022 11:24:37 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:24:37 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:24:37 AM	A89895
Selenium	0.056	0.050		mg/L	1	7/28/2022 3:11:26 PM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:24:37 AM	A89895
Sodium	900	10		mg/L	10	7/28/2022 1:34:04 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 8:47:15 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 8:47:15 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 8:47:15 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit Page 32 of 77

2207654-007

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-9

Collection Date: 7/13/2022 11:50:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Benzoic acid	ND	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Carbazole	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Chrysene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Dimethyl phthalate	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
2,4-Dichlorophenol	ND	5.0	μg/L	1	7/21/2022 8:47:15 PM	68843
2,4-Dimethylphenol	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
2,4-Dinitrophenol	ND	20	μg/L	1	7/21/2022 8:47:15 PM	68843
2,4-Dinitrotoluene	ND	5.0	μg/L	1	7/21/2022 8:47:15 PM	68843
2,6-Dinitrotoluene	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
Fluoranthene	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
Fluorene	ND	10	μg/L	1	7/21/2022 8:47:15 PM	68843
Hexachlorobenzene	ND	20	μg/L	1	7/21/2022 8:47:15 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

- Analyte detected in the associated Method Blank в
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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2207654-007

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-9

Collection Date: 7/13/2022 11:50:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst:	DAM
Isophorone	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/21/2022 8:47:15 PM	68843
Phenanthrene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Phenol	190	20	µg/L	1	7/21/2022 8:47:15 PM	68843
Pyrene	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Pyridine	ND	40	µg/L	1	7/21/2022 8:47:15 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 8:47:15 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 8:47:15 PM	68843
Surr: 2-Fluorophenol	59.7	29.4-87.7	%Rec	1	7/21/2022 8:47:15 PM	68843
Surr: Phenol-d5	47.6	28.5-64.7	%Rec	1	7/21/2022 8:47:15 PM	68843
Surr: 2,4,6-Tribromophenol	71.4	18.6-129	%Rec	1	7/21/2022 8:47:15 PM	68843
Surr: Nitrobenzene-d5	78.4	36.9-103	%Rec	1	7/21/2022 8:47:15 PM	68843
Surr: 2-Fluorobiphenyl	71.6	38.1-99.9	%Rec	1	7/21/2022 8:47:15 PM	68843
Surr: 4-Terphenyl-d14	98.7	48-155	%Rec	1	7/21/2022 8:47:15 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Benzene	5200	500	µg/L	500	7/15/2022 8:08:53 PM	R89550
Toluene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Ethylbenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2,4-Trimethylbenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,3,5-Trimethylbenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2-Dichloroethane (EDC)	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2-Dibromoethane (EDB)	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Naphthalene	ND	100	µg/L	50	7/15/2022 8:37:39 PM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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2207654-007

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-9

Collection Date: 7/13/2022 11:50:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
1-Methylnaphthalene	ND	200	µg/L	50	7/15/2022 8:37:39 PM	R89550
2-Methylnaphthalene	ND	200	µg/L	50	7/15/2022 8:37:39 PM	R89550
Acetone	ND	500	μg/L	50	7/15/2022 8:37:39 PM	R89550
Bromobenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Bromodichloromethane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Bromoform	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Bromomethane	ND	150	µg/L	50	7/15/2022 8:37:39 PM	R89550
2-Butanone	ND	500	µg/L	50	7/15/2022 8:37:39 PM	R89550
Carbon disulfide	ND	500	µg/L	50	7/15/2022 8:37:39 PM	R89550
Carbon Tetrachloride	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Chlorobenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Chloroethane	ND	100	µg/L	50	7/15/2022 8:37:39 PM	R89550
Chloroform	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Chloromethane	ND	150	µg/L	50	7/15/2022 8:37:39 PM	R89550
2-Chlorotoluene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
4-Chlorotoluene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
cis-1,2-DCE	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
cis-1,3-Dichloropropene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2-Dibromo-3-chloropropane	ND	100	µg/L	50	7/15/2022 8:37:39 PM	R89550
Dibromochloromethane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Dibromomethane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2-Dichlorobenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,3-Dichlorobenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,4-Dichlorobenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Dichlorodifluoromethane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,1-Dichloroethane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,1-Dichloroethene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,2-Dichloropropane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,3-Dichloropropane	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
2,2-Dichloropropane	ND	100	µg/L	50	7/15/2022 8:37:39 PM	R89550
1,1-Dichloropropene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
Hexachlorobutadiene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
2-Hexanone	ND	500	µg/L	50	7/15/2022 8:37:39 PM	R89550
Isopropylbenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
4-Isopropyltoluene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
4-Methyl-2-pentanone	ND	500	µg/L	50	7/15/2022 8:37:39 PM	R89550
Methylene Chloride	ND	150	µg/L	50	7/15/2022 8:37:39 PM	R89550
n-Butylbenzene	ND	150	µg/L	50	7/15/2022 8:37:39 PM	R89550
n-Propylbenzene	ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- Analyte detected in the associated Method Blank в
- Е Estimated value
- J Analyte detected below quantitation limits Р Sample pH Not In Range
- RL Reporting Limit

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2207654-007

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmenta	l Analysis	Laboratory, Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-9

Collection Date: 7/13/2022 11:50:00 AM

Received Date: 7/14/2022 9:35:00 AM Matrix: GROUNDWA

Result	RL	Qual Units	DF	Date Analyzed	Batch
				Analyst	JR
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	100	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	100	μg/L	50	7/15/2022 8:37:39 PM	R89550
ND	50	µg/L	50	7/15/2022 8:37:39 PM	R89550
ND	75	µg/L	50	7/15/2022 8:37:39 PM	R89550
105	70-130	%Rec	50	7/15/2022 8:37:39 PM	R89550
111	70-130	%Rec	50	7/15/2022 8:37:39 PM	R89550
113	70-130	%Rec	50	7/15/2022 8:37:39 PM	R89550
102	70-130	%Rec	50	7/15/2022 8:37:39 PM	R89550
	Result ND ND	Result RL ND 50 ND 75 105 70-130 111 70-130 113 70-130 102 70-130	Result RL Qual Units ND 50 µg/L ND 75 µg/L	Result RL Qual Units DF ND 50 µg/L 50 ND 70-130 %Rec 50	ResultRLQualUnitsDFDate AnalyzedND50µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND100µg/L507/15/2022 8:37:39 PMND50µg/L507/15/2022 8:37:39 PMND

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 Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL
 - Reporting Limit

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CLIENT **Project:**

Lab ID:

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

: Marathon	(Client Sample ID: WMW-4
Wingate 2022 Annual Groundwa	ater Sam	Collection Date: 7/13/2022 1:45:00 PM
2207654-008	Matrix: GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	0.00096	0.00050		mg/L	1	7/20/2022 3:36:39 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	190	5.0		mg/L	10	7/14/2022 9:02:18 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 9:02:18 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 9:02:18 PM	R89511
Sulfate	370	5.0	*	mg/L	10	7/14/2022 9:02:18 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	750.6	20.00		mg/L Ca	1	7/19/2022 5:47:23 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 5:47:23 PM	R89632
Total Alkalinity (as CaCO3)	750.6	20.00		mg/L Ca	1	7/19/2022 5:47:23 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	KS
Total Dissolved Solids	1560	40.0	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	8.02		Н	pH units	1	7/19/2022 5:47:23 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:06:52 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 11:27:50 AM	A89895
Barium	0.054	0.020		mg/L	1	7/28/2022 11:27:50 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:27:50 AM	A89895
Calcium	19	1.0		mg/L	1	7/28/2022 11:27:50 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:27:50 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:27:50 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 3:14:31 PM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:27:50 AM	A89895
Sodium	580	10		mg/L	10	7/28/2022 1:37:02 PM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Aniline	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Anthracene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Azobenzene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit Page 37 of 77

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	: Marathon			Cl	ient Sa	ample I	D: W	MW-4	
Project:	Wingate 2022 Annual Groundwa	ater Sam			Collect	ion Dat	t e: 7/1	3/2022 1:45:00 PM	
Lab ID:	2207654-008	Matrix:	GROUND	WA	Recei	ved Dat	t e: 7/1	4/2022 9:35:00 AM	
Analyses	3	R	esult	RL	Qual	Units	DF	Date Analyzed	Batch
EPA ME	THOD 8270C: SEMIVOLATILES							Analyst	DAM
Benzo(k)fluoranthene		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Benzoic	acid		ND	20		µg/L	1	7/21/2022 9:30:38 PM	68843
Benzyl a	alcohol		ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
Bis(2-ch	loroethoxy)methane		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Bis(2-ch	loroethyl)ether		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Bis(2-ch	lloroisopropyl)ether		ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
Bis(2-etl	hylhexyl)phthalate		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
4-Bromo	ophenyl phenyl ether		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Butyl be	nzyl phthalate		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Carbazo	ble		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
4-Chloro	o-3-methylphenol		ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
4-Chloro	baniline		ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
2-Chloro	onaphthalene		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
2-Chloro	ophenol		ND	5.0		µg/L	1	7/21/2022 9:30:38 PM	68843
4-Chloro	ophenyl phenyl ether		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Chrysen	ne		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Di-n-but	yl phthalate		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Di-n-oct	yl phthalate		ND	20		µg/L	1	7/21/2022 9:30:38 PM	68843
Dibenz(a	a,h)anthracene		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843
Dibenzo	furan		ND	10		µg/L	1	7/21/2022 9:30:38 PM	68843

ND

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

5.0

5.0

5.0

10

10

10

5.0

10

10

20

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10

10

20

20

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В

µg/L

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1

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Analyte detected in the associated Method Blank

7/21/2022 9:30:38 PM

68843

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Hall Environmental Analysis Laboratory, Inc.

E Estimated valueJ Analyte detected below quantitation

J Analyte detected below quantitation limits P Sample pH Not In Range

RL Reporting Limit

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PQL Practical Quanitative Limit S % Recovery outside of range due to dilution or matrix interference

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

Sample Diluted Due to Matrix

Not Detected at the Reporting Limit

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

Diethyl phthalate

Dimethyl phthalate

2,4-Dichlorophenol

2,4-Dimethylphenol

2,4-Dinitrophenol

2,4-Dinitrotoluene

2,6-Dinitrotoluene

Hexachlorobenzene

Hexachlorobutadiene

Indeno(1,2,3-cd)pyrene

Hexachloroethane

Hexachlorocyclopentadiene

*

D

Н

ND

Fluoranthene

Fluorene

Qualifiers:

4,6-Dinitro-2-methylphenol

3,3'-Dichlorobenzidine

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Er	nvironmenta	Inc. Date R	
CLIENT:	Marathon		Client Sample ID: WMW-4
Project:	Wingate 2022 A	nnual Groundwater Sam	Collection Date: 7/13/2022
Lab ID:	2207654-008	Matrix: GROUN	DWA Received Date: 7/14/2022

2 1:45:00 PM

2 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Isophorone	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
2-Methylnaphthalene	ND	5.0	μg/L	1	7/21/2022 9:30:38 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/21/2022 9:30:38 PM	68843
Phenanthrene	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
Phenol	ND	20	µg/L	1	7/21/2022 9:30:38 PM	68843
Pyrene	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
Pyridine	ND	40	µg/L	1	7/21/2022 9:30:38 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/21/2022 9:30:38 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/21/2022 9:30:38 PM	68843
Surr: 2-Fluorophenol	62.2	29.4-87.7	%Rec	1	7/21/2022 9:30:38 PM	68843
Surr: Phenol-d5	47.1	28.5-64.7	%Rec	1	7/21/2022 9:30:38 PM	68843
Surr: 2,4,6-Tribromophenol	66.3	18.6-129	%Rec	1	7/21/2022 9:30:38 PM	68843
Surr: Nitrobenzene-d5	75.7	36.9-103	%Rec	1	7/21/2022 9:30:38 PM	68843
Surr: 2-Fluorobiphenyl	71.9	38.1-99.9	%Rec	1	7/21/2022 9:30:38 PM	68843
Surr: 4-Terphenyl-d14	103	48-155	%Rec	1	7/21/2022 9:30:38 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Benzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Toluene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Naphthalene	ND	2.0	µg/L	1	7/15/2022 9:06:25 PM	R89550

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

Н 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 interference В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 39 of 77

2207654-008

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental	Analysis	Laboratory, Inc.	
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-4

Collection Date: 7/13/2022 1:45:00 PM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JR
1-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Acetone	ND	10	μg/L	1	7/15/2022 9:06:25 PM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Bromodichloromethane	ND	1.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
Bromoform	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Bromomethane	ND	3.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
2-Butanone	ND	10	µg/L	1	7/15/2022 9:06:25 PM	R89550
Carbon disulfide	ND	10	µg/L	1	7/15/2022 9:06:25 PM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Chloroethane	ND	2.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Chloroform	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Chloromethane	ND	3.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
2-Hexanone	ND	10	µg/L	1	7/15/2022 9:06:25 PM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/15/2022 9:06:25 PM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550

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
- Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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2207654-008

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Ana	alysis Laboratory,	Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-4

Collection Date: 7/13/2022 1:45:00 PM

Ma

Matrix: GROUNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JR
sec-Butylbenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Styrene	ND	1.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
tert-Butylbenzene	ND	1.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/15/2022 9:06:25 PM	R89550
Vinyl chloride	ND	1.0	μg/L	1	7/15/2022 9:06:25 PM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/15/2022 9:06:25 PM	R89550
Surr: 1,2-Dichloroethane-d4	112	70-130	%Rec	1	7/15/2022 9:06:25 PM	R89550
Surr: 4-Bromofluorobenzene	119	70-130	%Rec	1	7/15/2022 9:06:25 PM	R89550
Surr: Dibromofluoromethane	119	70-130	%Rec	1	7/15/2022 9:06:25 PM	R89550
Surr: Toluene-d8	104	70-130	%Rec	1	7/15/2022 9:06:25 PM	R89550

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon	Client Sample ID: WMW-2					
Project:	Wingate 2022 Annual Ground	water Sam	Collection Date: 7/13/2022 2:20:00 PM				
Lab ID:	2207654-009	Matrix: GROUNDWA	Received Date: 7/14/2022 9:35:00 AM				

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst:	bcv
Uranium	ND	0.00050		mg/L	1	7/20/2022 3:39:05 PM	68844
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	1100	50	*	mg/L	100	7/14/2022 10:06:46 PM	R89511
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	7/14/2022 9:53:53 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 9:53:53 PM	R89511
Sulfate	ND	5.0		mg/L	10	7/14/2022 9:53:53 PM	R89511
SM2320B: ALKALINITY						Analyst:	CAS
Bicarbonate (As CaCO3)	2098	50.00		mg/L Ca	2.5	7/20/2022 7:25:56 PM	R89743
Carbonate (As CaCO3)	ND	5.000		mg/L Ca	2.5	7/20/2022 7:25:56 PM	R89743
Total Alkalinity (as CaCO3)	2098	50.00		mg/L Ca	2.5	7/20/2022 7:25:56 PM	R89743
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	ĸs
Total Dissolved Solids	3860	100	*D	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst:	CAS
рН	7.91		н	pH units	1	7/19/2022 6:14:04 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst:	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:08:59 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	JRR
Arsenic	0.021	0.020		mg/L	1	7/28/2022 11:30:53 AM	A89895
Barium	0.60	0.020		mg/L	1	7/28/2022 11:30:53 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:30:53 AM	A89895
Calcium	41	1.0		mg/L	1	7/28/2022 11:30:53 AM	A89895
Calcium	43	10		mg/L	10	7/28/2022 1:40:13 PM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:30:53 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:30:53 AM	A89895
Selenium	0.074	0.050		mg/L	1	7/28/2022 3:01:48 PM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:30:53 AM	A89895
Sodium	1500	100		mg/L	100	7/29/2022 2:42:58 PM	A89913
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Aniline	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Anthracene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Azobenzene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/22/2022 2:05:11 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/22/2022 2:05:11 PM	68843

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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2207654-009

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Hall Environmental Analysis Laborat	ory, Inc.
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-2

Collection Date: 7/13/2022 2:20:00 PM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(g,h,i)perylene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
Benzo(k)fluoranthene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Benzoic acid	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Carbazole	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Chrysene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Fluoranthene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Fluorene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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Received l	by OCD:	9/16/2022	10:28:23 AM
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Analytical Report

Hall E	nvironmental Analysis	Laboratory,	Inc.			Lab Order 2207654 Date Reported: 8/1/202	2		
CLIENT: Project:	Marathon Wingate 2022 Annual Groundwa	Client Sample ID: WMW-2 ater Sam Collection Date: 7/13/2022 2:20:00 PM							
Lab ID:	2207654-009	Matrix: GROU	INDWA	Received Dat	e: 7/14	4/2022 9:35:00 AM			
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA MET	THOD 8270C: SEMIVOLATILES					Analyst	DAM		
Indeno(1	,2,3-cd)pyrene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Isophoro	ne	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
1-Methyl	naphthalene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
2-Methyl	naphthalene	5.8	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
2-Methyl	phenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
3+4-Met	hylphenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
N-Nitros	odi-n-propylamine	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
N-Nitros	odimethylamine	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
N-Nitros	odiphenylamine	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Naphtha	lene	11	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
2-Nitroar	niline	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
3-Nitroar	niline	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
4-Nitroar	niline	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
Nitroben	zene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
2-Nitroph	nenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
4-Nitroph	henol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Pentach	lorophenol	ND	40	µg/L	1	7/22/2022 2:05:11 PM	68843		
Phenant	hrene	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Phenol		ND	20	µg/L	1	7/22/2022 2:05:11 PM	68843		
Pyrene		ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Pyridine		ND	40	µg/L	1	7/22/2022 2:05:11 PM	68843		
1,2,4-Tri	chlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:05:11 PM	68843		
2,4,5-Tri	chlorophenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
2,4,6-Tri	chlorophenol	ND	10	µg/L	1	7/22/2022 2:05:11 PM	68843		
Surr: 2	2-Fluorophenol	29.5	15-84.5	%Rec	1	7/22/2022 2:05:11 PM	68843		
Surr: I	Phenol-d5	25.7	15-67	%Rec	1	7/22/2022 2:05:11 PM	68843		
Surr: 2	2,4,6-Tribromophenol	20.3	15-108	%Rec	1	7/22/2022 2:05:11 PM	68843		
Surr: I	Nitrobenzene-d5	42.8	16.8-112	%Rec	1	7/22/2022 2:05:11 PM	68843		
Surr: 2	2-Fluorobiphenyl	41.7	15-101	%Rec	1	7/22/2022 2:05:11 PM	68843		
Surr: 4	4-Terphenyl-d14	58.7	34.4-134	%Rec	1	7/22/2022 2:05:11 PM	68843		
EPA MET	THOD 8260B: VOLATILES					Analyst	: JR		
Benzene)	23000	500	µg/L	500	7/16/2022 12:27:18 AM	R89550		
Toluene		ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550		
Ethylben	izene	96	50	µg/L	50	7/16/2022 12:55:55 AM	R89550		
Methyl te	ert-butyl ether (MTBE)	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550		
1,2,4-Tri	methylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550		
1,3,5-Tri	methylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550		

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

ND

ND

50

50

Qualifiers:

* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

Н 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 interference В Analyte detected in the associated Method Blank

50

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

µg/L

µg/L

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7/16/2022 12:55:55 AM R89550

50 7/16/2022 12:55:55 AM R89550

1,2-Dichloroethane (EDC)

1,2-Dibromoethane (EDB)

2207654-009

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: WMW-2

Collection Date: 7/13/2022 2:20:00 PM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Naphthalene	ND	100	µg/L	50	7/16/2022 12:55:55 AM	R89550
1-Methylnaphthalene	ND	200	µg/L	50	7/16/2022 12:55:55 AM	R89550
2-Methylnaphthalene	ND	200	µg/L	50	7/16/2022 12:55:55 AM	R89550
Acetone	ND	500	µg/L	50	7/16/2022 12:55:55 AM	R89550
Bromobenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Bromodichloromethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Bromoform	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Bromomethane	ND	150	µg/L	50	7/16/2022 12:55:55 AM	R89550
2-Butanone	ND	500	µg/L	50	7/16/2022 12:55:55 AM	R89550
Carbon disulfide	ND	500	µg/L	50	7/16/2022 12:55:55 AM	R89550
Carbon Tetrachloride	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Chlorobenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Chloroethane	ND	100	µg/L	50	7/16/2022 12:55:55 AM	R89550
Chloroform	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Chloromethane	ND	150	µg/L	50	7/16/2022 12:55:55 AM	R89550
2-Chlorotoluene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
4-Chlorotoluene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
cis-1,2-DCE	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
cis-1,3-Dichloropropene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,2-Dibromo-3-chloropropane	ND	100	µg/L	50	7/16/2022 12:55:55 AM	R89550
Dibromochloromethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Dibromomethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,2-Dichlorobenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,3-Dichlorobenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,4-Dichlorobenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Dichlorodifluoromethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,1-Dichloroethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,1-Dichloroethene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,2-Dichloropropane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,3-Dichloropropane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
2,2-Dichloropropane	ND	100	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,1-Dichloropropene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Hexachlorobutadiene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
2-Hexanone	ND	500	µg/L	50	7/16/2022 12:55:55 AM	R89550
Isopropylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
4-Isopropyltoluene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
4-Methyl-2-pentanone	ND	500	µg/L	50	7/16/2022 12:55:55 AM	R89550
Methylene Chloride	ND	150	µg/L	50	7/16/2022 12:55:55 AM	R89550
n-Butylbenzene	ND	150	µg/L	50	7/16/2022 12:55:55 AM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon			Client Sample ID: WMW-2
Project:	Wingate 2022 Annual Groundwa	ater Sam		Collection Date: 7/13/2022 2:20:00 PM
Lab ID:	2207654-009	Matrix:	GROUNDWA	Received Date: 7/14/2022 9:35:00 AM

Hall Environmental Analysis Laboratory, Inc.

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	JR
n-Propylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
sec-Butylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
Styrene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
tert-Butylbenzene	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,1,1,2-Tetrachloroethane	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
1,1,2,2-Tetrachloroethane	ND	100	µg/L	50	7/16/2022 12:55:55 AM	R89550
Tetrachloroethene (PCE)	ND	50	µg/L	50	7/16/2022 12:55:55 AM	R89550
trans-1,2-DCE	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
trans-1,3-Dichloropropene	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
1,2,3-Trichlorobenzene	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
1,2,4-Trichlorobenzene	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
1,1,1-Trichloroethane	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
1,1,2-Trichloroethane	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
Trichloroethene (TCE)	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
Trichlorofluoromethane	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
1,2,3-Trichloropropane	ND	100	μg/L	50	7/16/2022 12:55:55 AM	R89550
Vinyl chloride	ND	50	μg/L	50	7/16/2022 12:55:55 AM	R89550
Xylenes, Total	130	75	µg/L	50	7/16/2022 12:55:55 AM	R89550
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	50	7/16/2022 12:55:55 AM	R89550
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	50	7/16/2022 12:55:55 AM	R89550
Surr: Dibromofluoromethane	104	70-130	%Rec	50	7/16/2022 12:55:55 AM	R89550
Surr: Toluene-d8	104	70-130	%Rec	50	7/16/2022 12:55:55 AM	R89550

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT: Marathon			Client Sample ID: DUP 7/13/2022							
Project:	Wingate 2022 Annual Groundwat	er Sam	Collection Date: 7/13/2022							
Lab ID:	2207654-010	Matrix:	Matrix: GROUNDW				eceived Date: 7/14/2022 9:35:00 AM			
Analyses		Re	esult	R	L	Qual	Units	DF	Date Analyzed	Batch
EPA 200.	8: METALS								Analyst	bcv
Uranium		(0.018	0.0005	50		mg/L	1	7/19/2022 11:52:15 AM	B89608
EPA MET	HOD 300.0: ANIONS								Analyst	ЈМТ
Chloride			450	5	50	*	ma/l	100	7/14/2022 10:32:30 PM	R89511
Nitrogen.	Nitrite (As N)		ND	1.	.0		ma/L	10	7/14/2022 10:19:38 PM	R89511
Nitrogen,	Nitrate (As N)		ND	1.	.0		mg/L	10	7/14/2022 10:19:38 PM	R89511
Sulfate	, , , , , , , , , , , , , , , , , , , ,		2200	5	50	*	mg/L	100	7/14/2022 10:32:30 PM	R89511
SM2320B							-		Analyst	CAS
Bicarbon	ate (As CaCO3)	-	730.8	20.0	0		mg/L Ca	1	7/19/2022 6:39:19 PM	R89632
Carbonat	te (As CaCO3)		ND	2.00	0		mg/L Ca	1	7/19/2022 6:39:19 PM	R89632
Total Alk	alinity (as CaCO3)	7	730.8	20.0	0		mg/L Ca	1	7/19/2022 6:39:19 PM	R89632
SM2540C	MOD: TOTAL DISSOLVED SOLI	DS							Analyst	KS
Total Dis	solved Solids		4250	20.	.0	*	mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-I	H+B / 9040C: PH								Analyst	CAS
pН			7.73			н	pH units	1	7/19/2022 6:39:19 PM	R89632
EPA MET	HOD 7470A: MERCURY								Analyst	VP
Mercury			ND	0.0002	20		mg/L	1	7/19/2022 1:11:07 PM	68877
EPA MET	HOD 6010B: DISSOLVED METAL	_S							Analyst	JRR
Arsenic			ND	0.02	20		mg/L	1	7/28/2022 11:34:17 AM	A89895
Barium			ND	0.02	20		mg/L	1	7/28/2022 11:34:17 AM	A89895
Cadmiun	n		ND	0.002	20		mg/L	1	7/28/2022 11:34:17 AM	A89895
Calcium			220	5.	0		mg/L	5	7/28/2022 1:43:18 PM	A89895
Chromiu	m		ND	0.006	0		mg/L	1	7/28/2022 11:34:17 AM	A89895
Lead			ND	0.02	20		mg/L	1	7/28/2022 11:34:17 AM	A89895
Selenium	1		ND	0.05	0		mg/L	1	7/28/2022 3:05:13 PM	A89895
Silver			ND	0.005	60		mg/L	1	7/28/2022 11:34:17 AM	A89895
Sodium			1200	5	60		mg/L	50	7/28/2022 2:01:23 PM	A89895
EPA MET	HOD 8270C: SEMIVOLATILES								Analyst	DAM
Acenaph	thene		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Acenaph	thylene		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Aniline			ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Anthrace	ne		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Azobenz	ene		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Benz(a)a	Inthracene		ND	5.	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Benzo(a)	pyrene		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Benzo(b)	fluoranthene		ND	1	0		µg/L	1	7/22/2022 2:47:52 PM	68843
Benzo(g,	h,i)perylene		ND	5.	.0		µg/L	1	7/22/2022 2:47:52 PM	68843

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

NDNot Detected at the Reporting LimitPQLPractical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits P Sample pH Not In Range

P Sample pH Not In Range RL Reporting Limit

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Released to Imaging: 10/17/2022 1:22:39 PM

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Received b	by OCD:	9/16/2022	10:28:23 AM
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Analytical Report Lab Order 2207654

Date Reported	8/1/2022
Date Reported.	0/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: DUP 7/13/2022 Collection Date: 7/13/2022

Lab ID: 2207654-010

Project:

CLIENT: Marathon

Matrix: GROUNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Benzoic acid	ND	20	µg/L	1	7/22/2022 2:47:52 PM	68843
Benzyl alcohol	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Carbazole	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Chrysene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/22/2022 2:47:52 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/22/2022 2:47:52 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/22/2022 2:47:52 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Fluoranthene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Fluorene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/22/2022 2:47:52 PM	68843
Hexachlorobutadiene	ND	20	μg/L	1	7/22/2022 2:47:52 PM	68843
Hexachlorocyclopentadiene	ND	20	μg/L	1	7/22/2022 2:47:52 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/22/2022 2:47:52 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/22/2022 2:47:52 PM	68843

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 interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limitsP Sample pH Not In Range

P Sample pH Not In Range RL Reporting Limit

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Received b	y OCD:	9/16/2022	10:28:23 AM
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Analytical Report Lab Order 2207654

Date Reported	8/1/2022
Date Reported.	0/1/2022

Hall Er	nvironmental An	alysis Laboratory, Inc.	Date Reported: 8/1/20
CLIENT:	Marathon		Client Sample ID: DUP 7/13/2022
Project:	Wingate 2022 Annual C	Groundwater Sam	Collection Date: 7/13/2022
Lab ID:	2207654-010	Matrix: GROUNDWA	Received Date: 7/14/2022 9:35:00 AM
Analyses		Result	RI Qual Units DF Date Analyzed

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst	DAM
Isophorone	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
1-Methylnaphthalene	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
2-Methylnaphthalene	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
2-Methylphenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
3+4-Methylphenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
N-Nitrosodimethylamine	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
Naphthalene	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
2-Nitroaniline	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
3-Nitroaniline	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
4-Nitroaniline	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
Nitrobenzene	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
2-Nitrophenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
4-Nitrophenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
Pentachlorophenol	ND	40		µg/L	1	7/22/2022 2:47:52 PM	68843
Phenanthrene	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
Phenol	ND	20		µg/L	1	7/22/2022 2:47:52 PM	68843
Pyrene	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
Pyridine	ND	40		µg/L	1	7/22/2022 2:47:52 PM	68843
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	7/22/2022 2:47:52 PM	68843
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/22/2022 2:47:52 PM	68843
Surr: 2-Fluorophenol	8.49	15-84.5	S	%Rec	1	7/22/2022 2:47:52 PM	68843
Surr: Phenol-d5	19.2	15-67		%Rec	1	7/22/2022 2:47:52 PM	68843
Surr: 2,4,6-Tribromophenol	1.66	15-108	S	%Rec	1	7/22/2022 2:47:52 PM	68843
Surr: Nitrobenzene-d5	78.3	16.8-112		%Rec	1	7/22/2022 2:47:52 PM	68843
Surr: 2-Fluorobiphenyl	68.5	15-101		%Rec	1	7/22/2022 2:47:52 PM	68843
Surr: 4-Terphenyl-d14	99.6	34.4-134		%Rec	1	7/22/2022 2:47:52 PM	68843
EPA METHOD 8260B: VOLATILES						Analyst	JR
Benzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Toluene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Ethylbenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Naphthalene	ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550

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

% Recovery outside of range due to dilution or matrix interference S

В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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Released to Imaging: 10/17/2022 1:22:39 PM

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

CLIENT:	Marathon		С	lient Sa	mple II	D: DI	UP 7/13/2022	
Project:	Wingate 2022 Annual Groundwa	ater Sam		Collect	ion Dat	e: 7 /1	13/2022	
Lab ID:	2207654-010	Matrix: GROUNE	WA	Receiv	ved Dat	e: 7 /1	14/2022 9:35:00 AM	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8260B: VOLATILES						Analyst:	JR
1-Methyl	naphthalene	ND	4.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
2-Methyl	naphthalene	ND	4.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Acetone		ND	10		µg/L	1	7/16/2022 1:24:33 AM	R89550
Bromobe	enzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Bromodi	chloromethane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Bromofo	rm	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Bromom	ethane	ND	3.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
2-Butanc	one	ND	10		µg/L	1	7/16/2022 1:24:33 AM	R89550
Carbon o	disulfide	ND	10		µg/L	1	7/16/2022 1:24:33 AM	R89550
Carbon 7	Fetrachloride	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Chlorobe	enzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Chloroet	hane	ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Chlorofo	rm	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Chlorom	ethane	ND	3.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
2-Chloro	toluene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
4-Chloro	toluene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
cis-1,2-D	DCE	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
cis-1,3-D	Dichloropropene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2-Dibro	omo-3-chloropropane	ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Dibromo	chloromethane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Dibromo	methane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2-Dichl	lorobenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,3-Dichl	lorobenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,4-Dichl	lorobenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Dichloro	difluoromethane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1-Dichl	loroethane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1-Dichl	loroethene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2-Dichl	loropropane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,3-Dichl	loropropane	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
2,2-Dichl	loropropane	ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1-Dichl	loropropene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Hexachlo	probutadiene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
2-Hexan	one	ND	10		µg/L	1	7/16/2022 1:24:33 AM	R89550
Isopropy	lbenzene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
4-Isopro	pyltoluene	ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
4-Methyl	-2-pentanone	ND	10		µg/L	1	7/16/2022 1:24:33 AM	R89550
Methyler	ne Chloride	ND	3.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
n-Butylbe	enzene	ND	3.0		µg/L	1	7/16/2022 1:24:33 AM	R89550

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

1.0

ND

* **Qualifiers:**

n-Propylbenzene

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

1

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit

µg/L

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R89550

7/16/2022 1:24:33 AM

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

7/16/2022 1:24:33 AM

R89550

CLIENT:	Marathon	Client Sample ID: DUP 7/13/2022							
Project:	Wingate 2022 Annual Ground	water Sam	vater Sam Collection Date: 7/13/2022						
Lab ID:	2207654-010	Matrix:	GROU	NDWA	Receiv	ved Dat	e: 7/1	4/2022 9:35:00 AM	
Analyses		Re	esult	RL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8260B: VOLATILES							Analyst:	JR
sec-Buty	lbenzene		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Styrene			ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
tert-Buty	lbenzene		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1,1,2-T	etrachloroethane		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1,2,2-T	etrachloroethane		ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Tetrachle	proethene (PCE)		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
trans-1,2	-DCE		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
trans-1,3	-Dichloropropene		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2,3-Tri	chlorobenzene		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2,4-Tri	chlorobenzene		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1,1-Tri	chloroethane		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,1,2-Tri	chloroethane		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Trichloro	ethene (TCE)		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Trichloro	fluoromethane		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
1,2,3-Tri	chloropropane		ND	2.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Vinyl chl	oride		ND	1.0		µg/L	1	7/16/2022 1:24:33 AM	R89550
Xylenes,	Total		ND	1.5		µg/L	1	7/16/2022 1:24:33 AM	R89550
Surr: 1	I,2-Dichloroethane-d4		112	70-130		%Rec	1	7/16/2022 1:24:33 AM	R89550
Surr: 4	1-Bromofluorobenzene		110	70-130		%Rec	1	7/16/2022 1:24:33 AM	R89550
Surr: [Dibromofluoromethane		118	70-130		%Rec	1	7/16/2022 1:24:33 AM	R89550

103

70-130

%Rec

1

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

Surr: Toluene-d8

- 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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 2207654

Date Reported: 8/1/2022

Client Sample ID: EB 7/13/2022

Project: Wingate 2022 Annual Groundwater Sam 2207654-011 Lab ID:

CLIENT: Marathon

Collection Date: 7/13/2022 10:25:00 AM

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst	bcv
Uranium	ND	0.00050		mg/L	1	7/19/2022 11:54:57 AM	B89608
EPA METHOD 300.0: ANIONS						Analyst	ЈМТ
Chloride	ND	5.0		ma/L	10	7/14/2022 10:45:21 PM	R89511
Nitrogen. Nitrite (As N)	ND	1.0		ma/L	10	7/14/2022 10:45:21 PM	R89511
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	7/14/2022 10:45:21 PM	R89511
Sulfate	ND	5.0		mg/L	10	7/14/2022 10:45:21 PM	R89511
SM2320B: ALKALINITY						Analyst	CAS
Bicarbonate (As CaCO3)	ND	20.00		mg/L Ca	1	7/19/2022 7:06:16 PM	R89632
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/19/2022 7:06:16 PM	R89632
Total Alkalinity (as CaCO3)	ND	20.00		mg/L Ca	1	7/19/2022 7:06:16 PM	R89632
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	KS
Total Dissolved Solids	ND	20.0		mg/L	1	7/22/2022 10:48:00 AM	68853
SM4500-H+B / 9040C: PH						Analyst	CAS
pH	6.16		Н	pH units	1	7/19/2022 7:06:16 PM	R89632
EPA METHOD 7470A: MERCURY						Analyst	VP
Mercury	ND	0.00020		mg/L	1	7/19/2022 1:17:30 PM	68877
EPA METHOD 6010B: DISSOLVED METALS						Analyst	JRR
Arsenic	ND	0.020		mg/L	1	7/28/2022 11:37:46 AM	A89895
Barium	ND	0.020		mg/L	1	7/28/2022 11:37:46 AM	A89895
Cadmium	ND	0.0020		mg/L	1	7/28/2022 11:37:46 AM	A89895
Calcium	ND	1.0		mg/L	1	7/28/2022 11:37:46 AM	A89895
Chromium	ND	0.0060		mg/L	1	7/28/2022 11:37:46 AM	A89895
Lead	ND	0.020		mg/L	1	7/28/2022 11:37:46 AM	A89895
Selenium	ND	0.050		mg/L	1	7/28/2022 3:08:43 PM	A89895
Silver	ND	0.0050		mg/L	1	7/28/2022 11:37:46 AM	A89895
Sodium	ND	1.0		mg/L	1	7/28/2022 11:37:46 AM	A89895
EPA METHOD 8270C: SEMIVOLATILES						Analyst	DAM
Acenaphthene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Acenaphthylene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Aniline	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Anthracene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Azobenzene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Benz(a)anthracene	ND	5.0		µg/L	1	7/22/2022 3:30:40 PM	68843
Benzo(a)pyrene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Benzo(b)fluoranthene	ND	10		µg/L	1	7/22/2022 3:30:40 PM	68843
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	7/22/2022 3:30:40 PM	68843

Matrix: GROUNDWA

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix Н

Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Sample pH Not In Range

Р RL Reporting Limit

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2207654-011

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported:	8/1/2022

Hall Environmental	Analysis	Laboratory, Inc.	
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Wingate 2022 Annual Groundwater Sam

Client Sample ID: EB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM . . .

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst	DAM
Benzo(k)fluoranthene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Benzoic acid	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Benzyl alcohol	ND	5.0	μg/L	1	7/22/2022 3:30:40 PM	68843
Bis(2-chloroethoxy)methane	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Bis(2-chloroethyl)ether	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Bis(2-chloroisopropyl)ether	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
Bis(2-ethylhexyl)phthalate	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Bromophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Butyl benzyl phthalate	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Carbazole	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Chloroaniline	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Chloronaphthalene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Chlorophenol	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Chlorophenyl phenyl ether	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Chrysene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Di-n-butyl phthalate	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Di-n-octyl phthalate	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Dibenz(a,h)anthracene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Dibenzofuran	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
1,2-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
1,3-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
1,4-Dichlorobenzene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
3,3´-Dichlorobenzidine	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Diethyl phthalate	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Dimethyl phthalate	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4-Dichlorophenol	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4-Dimethylphenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4-Dinitrophenol	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4-Dinitrotoluene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2,6-Dinitrotoluene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Fluoranthene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Fluorene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Hexachlorobenzene	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Hexachlorobutadiene	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Hexachlorocyclopentadiene	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Hexachloroethane	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Indeno(1,2,3-cd)pyrene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Sample pH Not In Range

Р RL Reporting Limit

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2207654-011

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: EB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

NDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES					Analyst:	DAM
Isophorone	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
1-Methylnaphthalene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Methylnaphthalene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Methylphenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
3+4-Methylphenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
N-Nitrosodimethylamine	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
N-Nitrosodiphenylamine	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Naphthalene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Nitroaniline	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
3-Nitroaniline	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Nitroaniline	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
Nitrobenzene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2-Nitrophenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
4-Nitrophenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Pentachlorophenol	ND	40	µg/L	1	7/22/2022 3:30:40 PM	68843
Phenanthrene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Phenol	ND	20	µg/L	1	7/22/2022 3:30:40 PM	68843
Pyrene	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Pyridine	ND	40	µg/L	1	7/22/2022 3:30:40 PM	68843
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4,5-Trichlorophenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
2,4,6-Trichlorophenol	ND	10	µg/L	1	7/22/2022 3:30:40 PM	68843
Surr: 2-Fluorophenol	59.5	15-84.5	%Rec	1	7/22/2022 3:30:40 PM	68843
Surr: Phenol-d5	43.6	15-67	%Rec	1	7/22/2022 3:30:40 PM	68843
Surr: 2,4,6-Tribromophenol	67.0	15-108	%Rec	1	7/22/2022 3:30:40 PM	68843
Surr: Nitrobenzene-d5	70.4	16.8-112	%Rec	1	7/22/2022 3:30:40 PM	68843
Surr: 2-Fluorobiphenyl	65.0	15-101	%Rec	1	7/22/2022 3:30:40 PM	68843
Surr: 4-Terphenyl-d14	95.7	34.4-134	%Rec	1	7/22/2022 3:30:40 PM	68843
EPA METHOD 8260B: VOLATILES					Analyst:	JR
Benzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Toluene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Naphthalene	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550

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 interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limitsP Sample pH Not In Range

P Sample pH Not In Range RL Reporting Limit

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Lab ID: 2207654-011

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

|--|

Project: Wingate 2022 Annual Groundwater Sam

Client Sample ID: EB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
1-Methylnaphthalene	ND	4.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Acetone	ND	10	µg/L	1	7/16/2022 1:53:06 AM	R89550
Bromobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Bromoform	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Bromomethane	ND	3.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
2-Butanone	ND	10	µg/L	1	7/16/2022 1:53:06 AM	R89550
Carbon disulfide	ND	10	µg/L	1	7/16/2022 1:53:06 AM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Chloroethane	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Chloroform	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Chloromethane	ND	3.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
2-Hexanone	ND	10	µg/L	1	7/16/2022 1:53:06 AM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/16/2022 1:53:06 AM	R89550
Methylene Chloride	ND	3.0	μg/L	1	7/16/2022 1:53:06 AM	R89550
n-Butylbenzene	ND	3.0	μg/L	1	7/16/2022 1:53:06 AM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р Sample pH Not In Range

RL Reporting Limit Page 55 of 77

2207654-011

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: EB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
sec-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Styrene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/16/2022 1:53:06 AM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/16/2022 1:53:06 AM	R89550
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	7/16/2022 1:53:06 AM	R89550
Surr: 4-Bromofluorobenzene	109	70-130	%Rec	1	7/16/2022 1:53:06 AM	R89550
Surr: Dibromofluoromethane	117	70-130	%Rec	1	7/16/2022 1:53:06 AM	R89550
Surr: Toluene-d8	105	70-130	%Rec	1	7/16/2022 1:53:06 AM	R89550

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

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2207654-012

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: FB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Matrix: GROUNDWA

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
Benzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Toluene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Ethylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Naphthalene	ND	2.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1-Methylnaphthalene	ND	4.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
2-Methylnaphthalene	ND	4.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Acetone	ND	10	μg/L	1	7/16/2022 2:21:41 AM	R89550
Bromobenzene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Bromodichloromethane	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Bromoform	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Bromomethane	ND	3.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
2-Butanone	ND	10	µg/L	1	7/16/2022 2:21:41 AM	R89550
Carbon disulfide	ND	10	μg/L	1	7/16/2022 2:21:41 AM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Chlorobenzene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Chloroethane	ND	2.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Chloroform	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Chloromethane	ND	3.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
2-Chlorotoluene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
4-Chlorotoluene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
cis-1,2-DCE	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Dibromochloromethane	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Dibromomethane	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,2-Dichlorobenzene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,3-Dichlorobenzene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,4-Dichlorobenzene	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
Dichlorodifluoromethane	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,1-Dichloroethane	ND	1.0	μg/L	1	7/16/2022 2:21:41 AM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/16/2022 2:21:41 AM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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2207654-012

Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported: 8/1/2022

Client Sample ID: FB 7/13/2022

Collection Date: 7/13/2022 10:25:00 AM

Hall Environmental Analysis Laboratory, Inc.

Wingate 2022 Annual Groundwater Sam

Matrix: GROUNDWA Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst:	JR
1,1-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
2-Hexanone	ND	10	µg/L	1	7/16/2022 2:21:41 AM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/16/2022 2:21:41 AM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
sec-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Styrene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/16/2022 2:21:41 AM	R89550
Xylenes, Total	ND	1.5	μg/L	1	7/16/2022 2:21:41 AM	R89550
Surr: 1,2-Dichloroethane-d4	110	70-130	%Rec	1	7/16/2022 2:21:41 AM	R89550
Surr: 4-Bromofluorobenzene	111	70-130	%Rec	1	7/16/2022 2:21:41 AM	R89550
Surr: Dibromofluoromethane	117	70-130	%Rec	1	7/16/2022 2:21:41 AM	R89550
Surr: Toluene-d8	105	70-130	%Rec	1	7/16/2022 2:21:41 AM	R89550

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

* Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL
 - Reporting Limit

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Qualifiers:

Received l	by (OCD:	9/16/	2022	10:2	28:23	AM
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Analytical Report Lab Order 2207654

Date Reported:	8/1/2022

Wingate 2022 Annual Groundwater Sam

Client Sample ID: Trip Blank **Collection Date:**

2207654-013 Lab ID:

Project:

CLIENT: Marathon

Matrix: TRIP BLANK

Received Date: 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	JR
Benzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Toluene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Ethylbenzene	ND	1.0	μg/L	1	7/16/2022 2:50:20 AM	R89550
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	7/16/2022 2:50:20 AM	R89550
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	7/16/2022 2:50:20 AM	R89550
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	7/16/2022 2:50:20 AM	R89550
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Naphthalene	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1-Methylnaphthalene	ND	4.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
2-Methylnaphthalene	ND	4.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Acetone	ND	10	µg/L	1	7/16/2022 2:50:20 AM	R89550
Bromobenzene	ND	1.0	μg/L	1	7/16/2022 2:50:20 AM	R89550
Bromodichloromethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Bromoform	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Bromomethane	ND	3.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
2-Butanone	ND	10	µg/L	1	7/16/2022 2:50:20 AM	R89550
Carbon disulfide	ND	10	µg/L	1	7/16/2022 2:50:20 AM	R89550
Carbon Tetrachloride	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Chlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Chloroethane	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Chloroform	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Chloromethane	ND	3.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
2-Chlorotoluene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
4-Chlorotoluene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
cis-1,2-DCE	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Dibromochloromethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Dibromomethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,3-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,4-Dichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Dichlorodifluoromethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1-Dichloroethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1-Dichloroethene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,3-Dichloropropane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
2,2-Dichloropropane	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550

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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference S

В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Received b	y OCD:	9/16/2022	10:28:23 AM
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Project:

Lab ID:

Analytical Report Lab Order 2207654

Date Reported:	8/1/2022

<i>u v v v</i>

Wingate 2022 Annual Groundwater Sam

Client Sample ID: Trip Blank **Collection Date:**

2207654-013

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Matrix: TRIP BLANK **Received Date:** 7/14/2022 9:35:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: JR
1,1-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Hexachlorobutadiene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
2-Hexanone	ND	10	µg/L	1	7/16/2022 2:50:20 AM	R89550
Isopropylbenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
4-Isopropyltoluene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
4-Methyl-2-pentanone	ND	10	µg/L	1	7/16/2022 2:50:20 AM	R89550
Methylene Chloride	ND	3.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
n-Butylbenzene	ND	3.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
n-Propylbenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
sec-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Styrene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
tert-Butylbenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
trans-1,2-DCE	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1,1-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,1,2-Trichloroethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Trichloroethene (TCE)	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Trichlorofluoromethane	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
1,2,3-Trichloropropane	ND	2.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Vinyl chloride	ND	1.0	µg/L	1	7/16/2022 2:50:20 AM	R89550
Xylenes, Total	ND	1.5	µg/L	1	7/16/2022 2:50:20 AM	R89550
Surr: 1,2-Dichloroethane-d4	108	70-130	%Rec	1	7/16/2022 2:50:20 AM	R89550
Surr: 4-Bromofluorobenzene	107	70-130	%Rec	1	7/16/2022 2:50:20 AM	R89550
Surr: Dibromofluoromethane	116	70-130	%Rec	1	7/16/2022 2:50:20 AM	R89550
Surr: Toluene-d8	103	70-130	%Rec	1	7/16/2022 2:50:20 AM	R89550

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

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н 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 interference в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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Qualifiers:

QC SUMMARY REPORT Hall E

nvironmental Analysis Laboratory, Inc.		01-Aug-22
	WO#:	2207654

Client: Project:	Marathor Wingate	n 2022 Annual	Grou	undwater Sa	ampling						
Sample ID:	MB	SampTyp	e: ME	BLK	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	PBW	Batch I	D: B8	9608	F	RunNo: 8	9608				
Prep Date:		Analysis Dat	e: 7/	19/2022	S	SeqNo: 3	191607	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		ND 0.0	0050								
Sample ID:	LCSLL	SampTyp	e: LC	SLL	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	BatchQC	Batch I	D: B8	9608	F	RunNo: 8	9608				
Prep Date:		Analysis Dat	e: 7/	19/2022	S	SeqNo: 3	191608	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.00053 0.0	0050	0.0005000	0	107	50	150			
Sample ID:	LCS	SampTyp	e: LC	S	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	LCSW	Batch I	D: B8	9608	F	RunNo: 8	9608				
Prep Date:		Analysis Dat	e: 7/	19/2022	5	SeqNo: 3	191609	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.013 0.0	0050	0.01250	0	100	85	115			
Sample ID:	MB-68844	SampTyp	e: ME	BLK	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	PBW	Batch I	D: 68	844	F	RunNo: 8	9655				
Prep Date:	7/18/2022	Analysis Dat	e: 7/	20/2022	S	SeqNo: 3	191947	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		ND 0.0	0050								
Sample ID:	MSLCSLL-68844	SampTyp	e: LC	SLL	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	BatchQC	Batch I	D: 68	844	F	RunNo: 8	9655				
Prep Date:	7/18/2022	Analysis Dat	e: 7/	20/2022	S	SeqNo: 3	191948	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.00053 0.0	0050	0.0005000	0	106	50	150			
Sample ID:	MSLCS-68844	SampTyp	e: LC	S	Tes	tCode: El	PA 200.8: M	letals			
Client ID:	LCSW	Batch I	D: 68	844	F	RunNo: 8	9655				
Prep Date:	7/18/2022	Analysis Dat	e: 7/	20/2022	S	SeqNo: 3	191949	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.013 0.0	0050	0.01250	0	103	85	115			

Qualifiers:

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

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Marathon

Client:

QC SUMMARY REPORT Hal

all Environmental Analysis Laboratory, Inc.	WO#:	2207654 01-Aug-22

Project:	Wingate 2022 Annua	l Grou	undwater Sa	ampling						
Sample ID: MB	SampTy	SampType: mblk TestCode: EPA M					300.0: Anions	;		
Client ID: PBW	Batch I	D: R8	9511	R	unNo: 8	9511				
Prep Date:	Analysis Dat	te: 7/	14/2022	S	eqNo: 3	185622	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	SampTy	SampType: Ics TestCode: EPA Method 30					300.0: Anions	;		
Client ID: LCSW	Batch I	Batch ID: R89511			RunNo: 89511					
Prep Date:	Analysis Dat	Analysis Date: 7/14/2022			SeqNo: 3185623					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Sulfate	10	0.50	10.00	0	104	90	110			
Sample ID: MB	SampTy	be: ml	olk	Tes	tCode: El	PA Method	300.0: Anions	;		
Client ID: PBW	Batch I	D: R8	9840	R	unNo: 8	9840				
Prep Date:	Analysis Dat	te: 7/	27/2022	S	eqNo: 3	199299	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	SampTy	be: Ics	5	Tes	tCode: El	PA Method	300.0: Anions	;		
Client ID: LCSW	Batch I	D: R8	9840	R	unNo: 8	9840				
Prep Date:	Analysis Dat	te: 7/	27/2022	S	eqNo: 3	199300	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	99.7	90	110			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
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- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2	220	765	54

01-Aug-22

		ind water Bt	unping						
Sample ID: 100ng Ics SampType	: LC	s	Test	TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW Batch ID	Batch ID: R89550			unNo: 8	9550				
Prep Date: Analysis Date	: 7/	15/2022	S	eqNo: 3	187577	Units: µg/L			
Analyte Result F	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene 20	1.0	20.00	0	99.8	70	130			
Toluene 19	1.0	20.00	0	96.5	70	130			
Chlorobenzene 20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene 20	1.0	20.00	0	98.0	70	130			
Trichloroethene (TCE) 19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4 10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene 11		10.00		107	70	130			
Surr: Dibromofluoromethane 11		10.00		113	70	130			
Surr: Toluene-d8 10		10.00		101	70	130			
Sample ID: 2207654-001ams SampType	SampType: MS TestCode: EPA Method 8260B: VOLATILES								
Client ID: WMW-8 Batch ID	Batch ID: R89550			RunNo: 89550					
Prep Date: Analysis Date	Analysis Date: 7/15/2022			SeqNo: 3187579 Units: µg					
Analyte Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene 21	1.0	20.00	0	105	70	130			
Toluene 20	1.0	20.00	0	101	70	130			
Chlorobenzene 20	1.0	20.00	0	99.8	70	130			
1,1-Dichloroethene 20	1.0	20.00	0	99.5	70	130			
Trichloroethene (TCE) 20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4 11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene 11		10.00		107	70	130			
Surr: Dibromofluoromethane 12		10.00		122	70	130			
Surr: Toluene-d8 10		10.00		100	70	130			
Sample ID: 2207654-001amsd SampType	: MS	D	Test	Code: EF	PA Method	8260B: VOL	ATILES		
Client ID: WMW-8 Batch ID	: R8	9550	R	unNo: 8 9	9550				
Prep Date: Analysis Date	: 7/	15/2022	S	eqNo: 3	187580	Units: µg/L			
Analyte Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene 20	1.0	20.00	0	98.8	70	130	5.79	20	
Toluene 19	1.0	20.00	0	95.6	70	130	5.19	20	
Chlorobenzene 19	1.0	20.00	0	96.2	70	130	3.68	20	
1,1-Dichloroethene 19	1.0	20.00	0	94.2	70	130	5.54	20	
Trichloroethene (TCE) 19	1.0	20.00	0	94.5	70	130	3.70	20	
Surr: 1,2-Dichloroethane-d4 11		10.00		108	70	130	0	0	
Surr: 4-Bromofluorobenzene 11		10.00		109	70	130	0	0	
Surr: Dibromofluoromethane 12		10.00		118	70	130	0	0	
Surr: Toluene-d8 10		10.00		100	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 interference

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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B Analyte detected in the associated Method Blank

QC SUMMARY REPORT Hall

	WO#:	2207654
Environmental Analysis Laboratory, Inc.		01-Aug-22

Client:	Marathon											
Project:	Wingate 2022 Ann	ual Gro	undwater S	ampling								
Sample ID: mb	Samp	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Bate	ch ID: R	39550	I	RunNo: 8	89550						
Prep Date:	Analysis	Date: 7	/15/2022	:	SeqNo: 3	3187595	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 (MT	BE) 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-Methvlnaphthalene	ND	4.0										
2-Methvlnaphthalene	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		10										
Chlorobenzene		1.0										
Chloroethane		2.0										
Chloroform		2.0										
Chloromothano		2.0										
		1.0										
		1.0										
	ND	1.0										
cis-1,2-DCE	ND	1.0										
cis-1,3-Dicnioropropene	ND	1.0										
1,2-Dibromo-3-chioropropa	ane ND	2.0										
Dibromocniorometnane	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. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- Analyte detected in the associated Method Blank В
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

AKI KEPUKI	WO#:	2207654
nental Analysis Laboratory, Inc.		01-Aug-22

Client: Marati	hon	vol Crea	un deviation C	and in a						
Froject: whigh	tte 2022 Annu	lai Gro	undwater Sa	ampning						
Sample ID: mb	SampT	ype: ME	BLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batcl	h ID: R8	9550	RunNo: 89550						
Prep Date:	Analysis D	Date: 7/	15/2022	:	SeqNo: 3187595		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								
lsopropylbenzene	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								
ert-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								
rans-1,2-DCE	ND	1.0								
rans-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								
/invl chloride	ND	1.0								
Kvlenes. Total	ND	1.5								
Surr: 1.2-Dichloroethane-d4	11	-	10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Sample ID: mb2	SampT	Type: ME	BLK	Tes	stCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batcl	Batch ID: R89550			RunNo: 89550					
Prep Date:	Analysis D	Date: 7/	15/2022	:	SeqNo: 3	187806	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Foluene	ND	1.0								
Ethylbenzene	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 interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT Hall Envir

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	WO#:	2207654
onmental Analysis Laboratory, Inc.		01-Aug-22

Client: Mar Project: Wir	athon gate 2022 Ann	ual Gro	undwater Sa	ampling							
Sample ID: mb2	Samp	Гуре: М І	BLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Bate	h ID· RS	89550		RunNo: 8	9550					
	Batch ID: R89550					3330					
Prep Date:	Analysis L	Date: 7	/15/2022	;	SeqNo: 3	187806	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
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-Rutanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1.0									
Chlorobenzene		1.0									
Chloroethane		2.0									
Chloroform		2.0									
Chloromothano		1.0									
		3.0									
	ND	1.0									
	ND	1.0									
CIS-1,2-DCE	ND	1.0									
cis-1,3-Dicnioropropene	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									

Qualifiers:

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

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

	WO#:	2207654	
aboratory, Inc.		01-Aug-22	

Client: N	Marathon											
Project: V	Wingate 2022	Annual	Grou	ndwater Sa	mpling							
Sample ID: mb2	:	SampTyp	e: MB	LK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW		Batch II	D: R89	9550		RunNo: 89	9550					
Prep Date:	Ana	lysis Dat	e: 7/1	5/2022		SeqNo: 31	187806	Units: µg/L				
Analyte	Re	esult	PQL	SPK value	SPK Ref Va	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
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									
tert-Butyl alcohol		ND	25									
Surr: 1,2-Dichloroethane	-d4	11		10.00		110	70	130				
Surr: 4-Bromofluorobenz	ene	11		10.00		111	70	130				
Surr: Dibromofluorometh	ane	12		10.00		117	70	130				
Surr: Toluene-d8		10		10.00		103	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 interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

	WO#:	2207654	
s Laboratory, Inc.		01-Aug-22	

Client: Maratho Project: Wingate	n 2022 Annu	ıal Grou	Indwater Sa	ampling						
Sample ID: mb-68843	SampType: MBLK			Tes	tCode: I					
Client ID: PBW	Batch ID: 68843		F	RunNo:	89675					
Prep Date: 7/18/2022	Analysis D	ate: 7/2	21/2022	5	SeqNo:	3193520	Units: µg/L			
Apoluto	Popult	DOI					Light imit	0/ DDD		Qual
Analyte	ND	10	SFR Value	SFR REI VAI	70REC		nighLinni	%RFD	KFULIIIII	Quai
Acenaphthelie	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzoturan	ND	10								
1,2-Dichlorobenzene		5.0								
1,3-Dichlorobenzene		5.0								
3.3' Dichlorobonzidino		5.0 10								
		10								
Dimethyl nhthalate		10								
2 4-Dichlorophenol		50								
2.4-Dimethylphenol		10								
4 6-Dinitro-2-methylphenol	ND	10								
2,4-Dinitrophenol	ND	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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 68 of 77

QC SUMMARY REPORT Hall En

	WO#:	2207654
vironmental Analysis Laboratory, Inc.		01-Aug-22

Client: Marath	ion	1.0	~	1.						
Project: Winga	te 2022 Annu	ial Grour	ndwater Sa	ampling						
Sample ID: mb-68843	SampT	ype: MBL	_K	TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch	n ID: 6884	43	I	RunNo: 8					
Prep Date: 7/18/2022	Analysis Date: 7/21/2022		SeqNo: 3193520			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	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	20								
Hexachlorobutadiene	ND	20								
-lexachlorocyclopentadiene	ND	20								
Hexachloroethane	ND	20								
ndeno(1,2,3-cd)pyrene	ND	10								
sophorone	ND	5.0								
-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
-Methylphenol	ND	10								
+4-Methylphenol	ND	10								
I-Nitrosodi-n-propylamine	ND	5.0								
I-Nitrosodimethylamine	ND	5.0								
I-Nitrosodiphenylamine	ND	10								
laphthalene	ND	5.0								
-Nitroaniline	ND	10								
8-Nitroaniline	ND	10								
l-Nitroaniline	ND	5.0								
litrobenzene	ND	5.0								
-Nitrophenol	ND	10								
l-Nitrophenol	ND	10								
Pentachlorophenol	ND	40								
Phenanthrene	ND	10								
Phenol	ND	20								
Pyrene	ND	10								
Pvridine	ND	40								
.2.4-Trichlorobenzene	ND	5.0								
4 5-Trichlorophenol	ND	10								
4 6-Trichlorophenol	ND	10								
Surr: 2-Eluorophenol	74	10	200.0		37.0	29.4	87 7			
Surr: Phenol-d5	56		200.0		28.1	20.4	64 7			S
Surr: 2 4 6-Tribromonhenol	90 87		200.0		20.1 12 1	20.J	120			5
Surr: Nitrohenzene-d5	<u>лл</u>		100.0		 1	26.0	103			
Surr: 2-Fluorohinhenvi	37		100.0		44.1 27 /	20.9 20.1				c
	57		100.0		57.4 77 E	30.1	33.3 1ee			3
Surf. 4- rerprienyl-014	11		100.0		C. 1 1	48	155			

Qualifiers:

Value exceeds Maximum Contaminant Level. *

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

% Recovery outside of range due to dilution or matrix interference S

В Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 69 of 77

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 2207654

Client:	Marathon
Project:	Wingate 2022 Annual Groundwater Sampling

Sample ID: Ics-68843	SampType: LCS TestCode: EPA Method 8270C: Semivolatiles									
Client ID: LCSW	Batch	n ID: 688	343	R	RunNo: 8 9	9675				
Prep Date: 7/18/2022	Analysis D	ate: 7/2	21/2022	S	SeqNo: 3	193521	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.3	21.3	104			
4-Chloro-3-methylphenol	130	5.0	200.0	0	66.4	31.8	104			
2-Chlorophenol	140	5.0	200.0	0	70.5	26.9	105			
1,4-Dichlorobenzene	55	5.0	100.0	0	55.3	15	89.8			
2,4-Dinitrotoluene	53	5.0	100.0	0	52.9	22.9	92.4			
N-Nitrosodi-n-propylamine	61	5.0	100.0	0	60.6	33.2	98.8			
4-Nitrophenol	83	10	200.0	0	41.4	27.4	64.2			
Pentachlorophenol	120	40	200.0	0	57.8	37.6	93			
Phenol	82	20	200.0	0	40.8	17	61.1			
Pyrene	81	10	100.0	0	81.3	61	123			
1,2,4-Trichlorobenzene	56	5.0	100.0	0	56.0	15	91.7			
Surr: 2-Fluorophenol	97		200.0		48.7	29.4	87.7			
Surr: Phenol-d5	73		200.0		36.7	28.5	64.7			
Surr: 2,4,6-Tribromophenol	120		200.0		60.3	18.6	129			
Surr: Nitrobenzene-d5	63		100.0		63.1	36.9	103			
Surr: 2-Fluorobiphenyl	56		100.0		55.6	38.1	99.9			
Surr: 4-Terphenyl-d14	91		100.0		Q1 1	48	155			
	•.		100.0		51.1	40	100			
Sample ID: Icsd-68843	SampT	ype: LC	SD	Tes	tCode: Ef	PA Method	8270C: Semiv	volatiles		
Sample ID: Icsd-68843 Client ID: LCSS02	SampT Batch	ype: LC	SD 843	Tes	tCode: EF	PA Method	8270C: Semi	volatiles		
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022	SampT Batch Analysis D	ype: LC 1D: 688 pate: 7/2	SD 343 21/2022	Tes R S	tCode: EF RunNo: 89 SeqNo: 31	PA Method 9675 193522	8270C: Semin	volatiles		
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte	SampT Batch Analysis D Result	ype: LC n ID: 688 Pate: 7/2 PQL	SD 343 21/2022 SPK value	Tes R SPK Ref Val	tCode: EF RunNo: 89 SeqNo: 3' %REC	PA Method 9675 193522 LowLimit	8270C: Semin Units: µg/L HighLimit	volatiles %RPD	RPDLimit	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene	SampT Batch Analysis D Result 73	ype: LC 1D: 688 Pate: 7/2 PQL 10	SD 343 21/2022 SPK value 100.0	Tes R S SPK Ref Val 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2	PA Method 9675 193522 LowLimit 21.3	8270C: Semin Units: µg/L HighLimit 104	volatiles %RPD 16.0	RPDLimit 45.3	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol	SampT Batch Analysis D Result 73 170	ype: LC n ID: 688 pate: 7/2 PQL 10 5.0	SD 343 21/2022 SPK value 100.0 200.0	Tes R SPK Ref Val 0 0	tCode: EF RunNo: 89 BeqNo: 3' %REC 73.2 82.5	PA Method 9675 193522 LowLimit 21.3 31.8	8270C: Semin Units: μg/L HighLimit 104 104	volatiles %RPD 16.0 21.6	RPDLimit 45.3 54.5	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol	SampT Batch Analysis D Result 73 170 180	ype: LC n ID: 688 pate: 7/2 PQL 10 5.0 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0	Tes R SPK Ref Val 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3' %REC 73.2 82.5 87.8	PA Method 9675 193522 LowLimit 21.3 31.8 26.9	8270C: Semin Units: μg/L HighLimit 104 104 105	%RPD 16.0 21.6 21.9	RPDLimit 45.3 54.5 44.5	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene	SampT Batch Analysis D Result 73 170 180 65	ype: LC n ID: 688 vate: 7/2 PQL 10 5.0 5.0 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0	Tes R SPK Ref Val 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15	8270C: Semin Units: μg/L HighLimit 104 105 89.8	%RPD 16.0 21.6 21.9 16.0	RPDLimit 45.3 54.5 44.5 39.6	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene	SampT Batch Analysis D Result 73 170 180 65 62	ype: LC: n ID: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0	Tes R SPK Ref Val 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9	8270C: Semin Units: μg/L HighLimit 104 105 89.8 92.4	%RPD 16.0 21.6 21.9 16.0 16.5	RPDLimit 45.3 54.5 44.5 39.6 33.1	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine	SampT Batch Analysis D Result 73 170 180 65 62 76	ype: LC: n ID: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 100.0	Tes R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2	8270C: Semiv Units: µg/L HighLimit 104 105 89.8 92.4 98.8	%RPD 16.0 21.6 21.9 16.0 16.5 22.7	RPDLimit 45.3 54.5 44.5 39.6 33.1 48	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol	SampT Batch Analysis D Result 73 170 180 65 62 76 98	ype: LC: ID: 688 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 10	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 100.0 200.0	Tes: R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4	8270C: Semiv Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130	ype: LC 1D: 688 ate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 10 40	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 100.0 200.0 200.0 200.0 200.0 200.0	Tes: R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3' %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6	8270C: Semi Units: μg/L HighLimit 104 105 89.8 92.4 98.8 64.2 93	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100	ype: LC n ID: 688 rate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0	Tes R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0 52.4	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17	8270C: Semin Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Phenol Pyrene	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87	ype: LC ID: 688 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20 10	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0 200.0 200.0 200.0 100.0	Tes R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0 52.4 87.4	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61	8270C: Semin Units: μg/L HighLimit 104 105 89.8 92.4 98.8 64.2 93 61.1 123	%RPD 16.0 21.6 21.9 16.0 21.3 22.7 16.6 13.3 24.9 7.18	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87 69	ype: LC: n ID: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20 10 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 200.0 200.0 200.0 200.0 200.0 200.0 100.0 100.0	Tes R S SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 62.4 76.2 48.9 66.0 52.4 87.4 69.2	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61 15	8270C: Semin Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1 123 91.7	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9 7.18 21.1	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8 34.2	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Sur: 2-Fluorophenol	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87 69 130	ype: LC: n ID: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20 10 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0 100.0 200.0 100.0 200.0	Tes R S SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0 52.4 87.4 69.2 63.5	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61 15 29.4	8270C: Semin Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1 123 91.7 87.7	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9 7.18 21.1 0	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8 34.2 0	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Sur: 2-Fluorophenol Sur: Phenol-d5	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87 69 130 100	ype: LC: D: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20 10 5.0 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0 100.0 2	Tes R S SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0 52.4 87.4 69.2 63.5 49.9	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61 15 29.4 28.5	8270C: Semiv Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1 123 91.7 87.7 64.7	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9 7.18 21.1 0 0	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8 34.2 0 0 0	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Surr: 2-Fluorophenol Surr: Phenol-d5 Surr: 2,4,6-Tribromophenol	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87 69 130 100 100 150	ype: LC: D: 688 pate: 7/2 PQL 10 5.0 5.0 5.0 5.0 5.0 10 40 20 10 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 2	Tes: R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 66.0 52.4 87.4 69.2 63.5 49.9 74.5	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61 15 29.4 28.5 18.6	8270C: Semin Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1 123 91.7 87.7 64.7 129	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9 7.18 21.1 0 0 0 0 0 0 0	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8 34.2 0 0 0 0	Qual
Sample ID: Icsd-68843 Client ID: LCSS02 Prep Date: 7/18/2022 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Surr: 2-Fluorophenol Surr: Phenol-d5 Surr: 2,4,6-Tribromophenol Surr: Nitrobenzene-d5	SampT Batch Analysis D Result 73 170 180 65 62 76 98 130 100 87 69 130 100 150 80	ype: LC ID: 688 PQL 10 5.0 5.0 5.0 5.0 5.0 5.0 10 40 20 10 5.0	SD 343 21/2022 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0 200.0 200.0 200.0 200.0 200.0 200.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 100.0 200.0 200.0 100.0 200.0 100.0 200.0 200.0 100.0 200.0 200.0 100.0 200.0 200.0 100.0 2	Tes R S SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tCode: EF RunNo: 89 SeqNo: 3 %REC 73.2 82.5 87.8 64.9 62.4 76.2 48.9 62.4 76.2 48.9 66.0 52.4 87.4 69.2 63.5 49.9 74.5 80.0	PA Method 9675 193522 LowLimit 21.3 31.8 26.9 15 22.9 33.2 27.4 37.6 17 61 15 29.4 28.5 18.6 36.9	8270C: Semin Units: μg/L HighLimit 104 104 105 89.8 92.4 98.8 64.2 93 61.1 123 91.7 87.7 64.7 129 103	%RPD 16.0 21.6 21.9 16.0 16.5 22.7 16.6 13.3 24.9 7.18 21.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RPDLimit 45.3 54.5 44.5 39.6 33.1 48 14.7 15 42.5 11.8 34.2 0 0 0 0 0 0	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range RL Reporting Limit

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OC SUMMADV DEDODT

Qualifiers:

* D

Н

S

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix interference

Sample Diluted Due to Matrix

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Analyte	detected	in	the	accordiated	Method	Blank
Analyte	uciccicu		unc	associated	wichiou	Diank

Е Estimated value

В

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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UC SUN Hall Env	Hall Environmental Analysis Laboratory, Inc.									
Client: Project:	Maratho Wingate	on e 2022 Annual Groundwater Sar	npling							
Sample ID: Ic:	sd-68843	SampType: LCSD	TestCode: EPA Method 82							

Sample ID: Icsd-68843	SampType: LCSD TestCoo			tCode: El	e: EPA Method 8270C: Semivolatiles					
Client ID: LCSS02	Batch	h ID: 68	843	F	RunNo: 8	9675				
Prep Date: 7/18/2022	Analysis D	Date: 7/	21/2022	S	SeqNo: 3 '	193522	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	100		100.0		100	48	155	0	0	
Sample ID: mb-68843	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8270C: Semiv	volatiles		
Client ID: PBW	Batch	h ID: 68	843	F	RunNo: 8 9	9740				
Prep Date: 7/18/2022	Analysis D	Date: 7/	22/2022	S	SeqNo: 3	195137	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1.4-Dichlorobenzene	ND	5.0								

2207654 01-Aug-22

WO#:

QC SUMMARY REPORT Hall Env

	WO#:	2207654
vironmental Analysis Laboratory, Inc.		01-Aug-22

Client: N	larathon									
Project: W	Vingate 2022 Ann	ual Groun	dwater Sa	mpling						
Sample ID: mb-68843	s Samp	Type: MBL	к	Tes	tCode: E	PA Method	8270C: Semi	volatiles		
Client ID: PBW	Bato	h ID: 6884	3	I	RunNo: 8	9740				
Prep Date: 7/18/202	2 Analysis I	Date: 7/22	/2022	:	SeqNo: 3	195137	Units: µg/L			
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	10					0			
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	10								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	20								
Hexachlorobutadiene	ND	20								
Hexachlorocyclopentadiene	ND	20								
Hexachloroethane	ND	20								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	40								
Phenanthrene	ND	10								
Phenol	ND	20								
Pyrene	ND	10								
Pyridine	ND	40								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

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

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

2207654	WO#:
01-Aug-22	

Client: Project:	Marathon Wingate 2022 Annual C	Groundwater Sampling	
Sample ID: mb-68	843 SampType:	MBLK TestCode:	EPA Method 8270C: Semivolatiles
Client ID: PBW	Batch ID:	68843 RunNo:	89740

Prep Date: 7/18/2022	Analysis D	ate: 7/	22/2022	S	SeqNo: 3	195137	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 2-Fluorophenol	76		200.0		37.8	15	84.5				
Surr: Phenol-d5	58		200.0		28.9	15	67				
Surr: 2,4,6-Tribromophenol	82		200.0		41.1	15	108				
Surr: Nitrobenzene-d5	43		100.0		43.2	16.8	112				
Surr: 2-Fluorobiphenyl	39		100.0		39.0	15	101				
Surr: 4-Terphenyl-d14	79		100.0		78.7	34.4	134				

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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OC SUMMARY REPORT H

QUDU.		WO#: 2207654	
Hall Env	Environmental Analysis Laboratory, Inc.		
Client:	Marathon		

Project:	Wingate	e 2022 Annual Groundwater Sa	mpling							
Sample ID:	D: MB-68877 SampType: MBLK TestCode: EPA Method 7470A: Mercury									
Client ID:	PBW	Batch ID: 68877	RunNo: 89613							
Prep Date:	7/19/2022	Analysis Date: 7/19/2022	SeqNo: 3190039	Units: mg/L						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RP	DLimit Qual					
Mercury		ND 0.00020								
Sample ID:	LCSLL-68877	SampType: LCSLL	TestCode: EPA Method	7470A: Mercury						
Client ID:	BatchQC	Batch ID: 68877	RunNo: 89613							
Prep Date:	7/19/2022	Analysis Date: 7/19/2022	SeqNo: 3190040	Units: mg/L						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RP	DLimit Qual					
Mercury		ND 0.00020 0.0001500	0 56.5 50	150						
Sample ID:	LCS-68877	SampType: LCS	TestCode: EPA Method	7470A: Mercury						
Client ID:	LCSW	Batch ID: 68877	RunNo: 89613							
Prep Date:	7/19/2022	Analysis Date: 7/19/2022	SeqNo: 3190041	Units: mg/L						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RP	DLimit Qual					
Mercury		0.0050 0.00020 0.005000	0 99.7 85	115						

Qualifiers:

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

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QC SUMMARY REPORT Hall

Page	117 of 136	
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	WO#:	2207654
Environmental Analysis Laboratory, Inc.		01-Aug-22

Client: Project:		Marathon Wingate 2022 Ann	nual Grou	undwater Sa	ampling							
Sample ID:	MB-A	Samp	oType: ME	BLK	TestCode: EPA Method 6010B: Dissolved Metals							
Client ID:	PBW	Bat	Batch ID: A89895				9895					
Prep Date:		Analysis	Date: 7/	28/2022	S	SeqNo: 3	202284	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic		ND	0.020									
Barium		ND	0.020									
Cadmium		ND	0.0020									
Calcium		ND	1.0									
Chromium		ND	0.0060									
Lead		ND	0.020									
Selenium		ND	0.050									
Silver		ND	0.0050									
Sodium		ND	1.0									
Sample ID:	LCS-A	Samp	oType: LC	S	Tes	tCode: E	PA Method	6010B: Disso	lved Meta	als		
Client ID:	LCSW	Bat	ch ID: A8	9895	F	RunNo: 8	9895					
Prep Date:		Analysis	Date: 7/	28/2022	S	SeqNo: 3	202286	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic		0.50	0.020	0.5000	0	99.1	80	120				
Barium		0.47	0.020	0.5000	0	93.7	80	120				
Cadmium		0.48	0.0020	0.5000	0	95.1	80	120				
Calcium		51	1.0	50.00	0	102	80	120				
Chromium		0.48	0.0060	0.5000	0	96.4	80	120				
Lead		0.48	0.020	0.5000	0	97.0	80	120				
Selenium		0.48	0.050	0.5000	0	95.2	80	120				
Silver		0.093	0.0050	0.1000	0	93.2	80	120				
Sodium		50	1.0	50.00	0	100	80	120				

Qualifiers:

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- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT H

	WO#:	2207654
all Environmental Analysis Laboratory, Inc.		01-Aug-22

Client:	Marathor	n									
Project:	Wingate	2022 Annu	ial Grou	indwater Sa	ampling						
Sample ID:	mb-1 alk	SampT	ype: mb	olk	Tes	tCode: SI	/12320B: Al	kalinity			
Client ID:	PBW	Batch	n ID: R8	9632	F	RunNo: 8 9	9632				
Prep Date:		Analysis D	ate: 7/	19/2022	S	SeqNo: 31	191170	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	SampT	ype: Ics	;	Tes	tCode: SI	/12320B: Al	kalinity			
Client ID:	LCSW	Batch	n ID: R8	9632	F	RunNo: 8 9	9632				
Prep Date:		Analysis D	ate: 7/	19/2022	S	SeqNo: 31	191171	Units: mg/L	. CaCO3		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity	(as CaCO3)	75.88	20.00	80.00	0	94.8	90	110			
Sample ID:	mb-1 alk	SampT	ype: mb	olk	Tes	tCode: SI	/12320B: Al	kalinity			
Client ID:	PBW	Batch	n ID: R8	9743	F	RunNo: 8 9	9743				
Prep Date:		Analysis D	ate: 7/	20/2022	S	SeqNo: 31	195482	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	SampT	ype: Ics	;	Tes	tCode: SI	/12320B: Al	kalinity			
Client ID:	LCSW	Batch	n ID: R8	9743	F	RunNo: 8 9	9743				
Prep Date:		Analysis D	ate: 7/	20/2022	S	SeqNo: 31	195484	Units: mg/L	CaCO3		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity	(as CaCO3)	77.36	20.00	80.00	0	96.7	90	110			
Sample ID:	mb-1 alk	SampT	ype: mb	olk	Tes	tCode: SI	/12320B: Al	kalinity			
Client ID:	PBW	Batch	n ID: R8	9866	F	RunNo: 8 9	9866				
Prep Date:		Analysis D	ate: 7/	28/2022	S	SeqNo: 32	202007	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	SampT	ype: Ics	;	Tes	tCode: SN	/12320B: Al	kalinity			
Client ID:	LCSW	Batch	n ID: R8	9866	F	RunNo: 8 9	9866				
Prep Date:		Analysis D	ate: 7/	28/2022	5	SeqNo: 32	202008	Units: mg/L	. CaCO3		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity	(as CaCO3)	77.52	20.00	80.00	0	96.9	90	110			

Qualifiers:

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

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OC SUMMARY REPORT Η

	WO#:	2207654
all Environmental Analysis Laboratory, Inc.		01-Aug-22

Client:	Marathon										
Project:	Wingate 2	022 Annu	al Grou	undwater Sa	ampling						
Sample ID:	MB-68853	SampT	ype: ME	BLK	Tes	tCode: S	M2540C MC	DD: Total Diss	olved So	lids	
Client ID:	PBW	Batch	ID: 68	853	F	RunNo: 8	89702				
Prep Date:	7/18/2022	Analysis Da	ate: 7/	22/2022	S	SeqNo: 3	3193956	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved	I Solids	ND	20.0								
Sample ID:	Sample ID: LCS-68853 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids										
Client ID:	LCSW	Batch	ID: 68	853	F	RunNo: 8	89702				
Prep Date:	7/18/2022	Analysis Da	ate: 7/	22/2022	S	SeqNo: 3	3193957	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved	I Solids	1020	20.0	1000	0	102	80	120			
Sample ID:	2207654-001CDUP	SampT	ype: DL	JP	Tes	tCode: S	M2540C MC	DD: Total Diss	olved So	lids	
Client ID:	WMW-8	Batch	ID: 68	853	F	RunNo: 8	89702				
Prep Date:	7/18/2022	Analysis Da	ate: 7/	22/2022	S	SeqNo: 3	3193959	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved	I Solids	855	20.0						0.815	10	*

Qualifiers:

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

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HALL ENVIRONMENTAI ANALYSIS LABORATORY	-	Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com					Sample Log-In Check Lis			
Client Name: Marathon		Work Order Nun	nber: 220	7654			RcptN	o: 1		
Received By: Andy Freem	ian	7/14/2022 9:35:00	АМ		an	4	_			
Completed By: Desiree Dor	ninguez	7/14/2022 11:58:3	2 AM		TE	2				
Reviewed By: Scal 7	2/14/22				1	-4				
Chain of Custody										
1. Is Chain of Custody complet	e?		Yes	V	No	b	Not Present			
2. How was the sample deliver	ed?		Clie	nt						
Log In										
3. Was an attempt made to coo	ol the samples?		Yes		No					
4. Were all samples received at	a temperature of	>0° C to 6.0°C	Yes		No					
5. Sample(s) in proper containe	er(s)?		Yes		No					
6. Sufficient sample volume for	indicated test(s)?		Yes	~	No					
7. Are samples (except VOA and	d ONG) properly p	reserved?	Yes	~	No					
8. Was preservative added to be	ottles?		Yes		No	~	NA 🗌			
9. Received at least 1 vial with h	neadspace <1/4" fo	r AQ VOA?	Yes	~	No					
10, Were any sample containers	received broken?		Yes		No	•	# of preserved			
11. Does paperwork match bottle (Note discrepancies on chain	labels? of custody)		Yes	~	No		for pH:	 or >12 unle	ess noted)	
12. Are matrices correctly identified	ed on Chain of Cus	stody?	Yes	V	No		Adjusted?	AIA	ues	
13. Is it clear what analyses were	requested?		Yes	~	No				J	
14. Were all holding times able to (If no, notify customer for auth	be met? horization.)		Yes	~	No		Checked by:	KPG	7.14.2	
Special Handling (if applic	cable)									
15. Was client notified of all discr	repancies with this	order?	Yes		No		NA 🔽			
Person Notified:		Date	-							
By Whom:		Via:	□ eMa	ail 🗆 F	hone 🗆	Fax	In Person			
Regarding:						1.1.20				
Client Instructions:	1.7.1						_			
16. Additional remarks: Add	ded 0.5n	n of 1	HNO3	40	50	mac	imple sar	nple	2	
17. <u>Cooler Information</u> Cooler No Temp °C	Condition Seal	DO9D . Intact Seal No	Add Seal Da	ecl	0.4 Signed	m By	of HNC sample	s to	2	
2 2.9 G	ood						compic			
	and the second sec						Lac all	<2.	-	

Page 1 of 1

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Client:	Client: Marathon Gallup Refinery				Rush_	x				F		LL Al'	EN' YSI	VIR SL		IME OR/	AT	TA OF
				Project Name	9:					ww	w.na	lienvi	ronme	ental.co	m			
Mailing Address: 92 Giant Crossing Road			Wingate 202	2 Annual Gro	oundwater Sampling		49	01 H	lawk	kins	NE -	Albu	querque	, NN	8710	9		
		Jamesto	NM,87301	Project #: 69	7-087-002			Tel. 505-345-3975 Fax 505-345-4107										
Phone #:	Phone #: 808-640-1823										-	An	alysis	Reque	est			
email or Fax	(# :			Project Mana	ager:	1					003							
QA/QC Package: X Standard			Lesli Alexand	ler/ Mackenzi	e Swift			als		a as Ca(solved		gen					
Accreditation:			mpliance	Sampler:	A				Veta		Tot	Dis	8	itro	niun			
NELAC Other			On Ice:	X Yes	🗆 No			ed		inity,	otal		e, N	Urai				
X EDD (Typ	be)	_		# of Coolers:	3		0	8	solv	h	Alkal	E.		orid	otal			
Date	Time	Matrix	Sample Name	Container Type and #	Preservative	HEAL No.	3260 - VC	8270 - SV	3010 -Dis	470 - Merc	M2320B -	SM2540C Solids	040 - pH	300.0 Chl Vitrate, Si	200.8 - To			
7/10/0000	40.00	CIAL	WMW-8	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- 11	-001	v	v	v	Y	X	x	v v	x x	Y		-	+
7/12/2022	12.20	GW	WMW-3	0		007	1 V	×					v	v	×		-	
7/12/2022	13.23	GW	WMW-6	0		- 003		v	v	v	v	v	v	v	×			+
7/13/2022	0.40	GW	WMW-1R	0		-004	v	v	×	Ŷ	Ŷ	N V	×	x	X	1	-	+
7/13/2022	9:40	GVV	WMW/-5	0		-005		~ v	Ŷ		N N						+	+
7/13/2022	10:25	GW	WMW-7	0		001						∧ ∨	×				+	+
7/13/2022	11:15	GW	WMW-9	0		_007	v	×	×	^ V	x	x	×	x	x			+
7/13/2022	12:45	GW	WMW-4	0		-008	x	x	×	x	x	x	x	x	X		1	-
7/13/2022	14.20	GW	WMW-2	8		- 009	x	x	x	x	x	x	x	x	x		-	
7/13/2022	14.20	GW	DUP 7/13/2022	8		-010	x	x	x	x	x	x	x	x	x			
7/13/2022	10.25	WATER	EB 7/13/2022	8	1	-011	x	x	x	x	x	x	x	x	x		1	
7/13/2022	10.25	WATER	FB 7/13/2022	3	· · · · · · ·	-012	x									121		
Date 7/14/2022	Time: 8:00	Relinquished by:		Received by: Via: Date Time 7/14/22 0935		Plea 4,	Please rush these 4,1-0,2=3,9 < Trip Blank-003											
Date:	Time:	Relinquish	ed by:	Received by: Via: Date Time			- 211-0,2=2.9° War 119.20 9.4-0,2=4,2°											

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 TEL. W	Environmental Analysis Laborate 4901 Hawkins . Albuquerque, NM 871 : 505-345-3975 FAX: 505-345-41 ebsite: www.hallenvironmental.c	QUOT Quote#: Date:	2442 2/10/2022		
Company:	Trihydro Corporation			Project	Wing	ate Groundwat	ar Sampling	100000000
Contact:	Mackensie Swift			TAT	10 w	ate Groundwar	er sampning	
Address:	1252 Commerce Dr.			OC Level	LEVE	T II		
				Project Manager	Andy	Freeman		
	Laramie, Wy 82072			Sales Rep	rundy	riceman		
Phone:				Ouote Expires:	12/31	/2022		
Fax:						(-01-		
Item Desc	ription	Test	Matrix	Remarks	Qty	Unit Price		Total
EPA Metho	d 8260B: VOLATILES	SW8260B	Aqueous		15	50.00		750.00
EPA Metho	d 8270C: Semivolatiles	SW8270C	Aqueous		13	115.00		1,495.00
EPA Metho	d 7470A: Mercury	SW7470	Aqueous		13	25.00		325.00
SM2320B:	Alkalinity	SM2320B	Aqueous		13	15.00		195.00
SM2540C N	AOD: Total Dissolved S	M2540C	Aqueous		13	15.00		195.00
SM4500-H-	-B / 9040C: pH	M4500-H+B	Aqueous		13	10.00		130.00
EPA Metho	d 300.0: Anions	E300	Aqueous	CI, NO3, SO4	13	30.00		390.00
EPA 200.8:	Metals	E200.8	Aqueous	U	13	25.00		325.00
EPA Metho	d 6020A: Dissolved Met	SW6020	Aqueous	As, Ba, Cd, Ca, Cr, Pb, Se, Ag, Na	13	70.00		910.00
EPA Metho	1 8260B: Volatiles	SW8260B	Soil		4	50.00		200.00
EPA Method	1 8270C: Semivolatiles	SW8270C	Soil		4	115.00		460.00
EPA Method	1 6020A: Metals	E200.8	Soil	As,Ba,Cd,Ca,Cr,Pb,Sc, U, Ag,Na	4	80.00		320.00
EPA Method	17471B: Mercury	SW7471	Soil		4	25.00		100.00
EPA Method	1 300.0: Anions	E300	Soil		4	40.00		160.00
							Cub Tatal	

Missellanesus Charge Same				Sub Total:	\$5,955.00	
Miscellaneous Charge Summary			7.55	Mise:	\$342.00	
Item	Unit	Qty	Total	Surcharge	0%	
Methanol Kit	18.00	4	72.00	100 A 100 A		
Filters	18.00	15	270.00	TOTAL:	\$6,297.00	

Sincerely,

andy

Andy Freeman Laboratory Manager Phone: 505-345-3975 Email: andy@hallenvironmental.com

Terms and Conditions:

Hall Environmental Analysis Laboratory (HEAL) will provide all sampling containers, coolers, chains of custody and labels. A standard data deliverables package and QC package will be provided with this report, including lab spikes and lab spike duplicates. NM State tax has not been included in this quotation. Thank you, for the opportunity to bid on this project. Please feel free to call with any questions (505) 345-3975.. Invoices can be paid via Visa, Master Card, American Express, Company Check or Cash.

Appendix C. Tier II Data Validation Report



Client: Marathon Oil	Laboratory: Hall Environmental							
Project Name: Wingate 2022 Annual Groundwater	Sample Matrix: Groundwater							
Project Number: 697-080-002 Task 0016	Sample Start Date: 07/12/2022							
Date Validated: 09/01/2022	Sample End Date: 07/13/2022							
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	1 8270C							
 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								
 Dissolved Metals by SW-846 Method 6010B 								
 Total Mercury by SW-846 Method 7470A 								
Total Uranium by Environmental Protection Agency (EPA) Me	thod 200.8							
 Anions by Methods for Chemical Analysis of Water and Waster 	es (MCAWW) Method 300.0							
Laboratory Project ID: 2207654								
Data Validator: Kyle Power, Environmental Chemist								
Reviewer: Charles Ballek, 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)



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Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blank
- Field blank
- Equipment blank

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.

Client Sample ID	Laboratory Sample Number
WMW-8	2207654-001
WMW-3	2207654-002
WMW-6	2207654-003
WMW-1R	2207654-004
WMW-5	2207654-005
WMW-7	2207654-006
WMW-9	2207654-007
WMW-4	2207654-008
WMW-2	2207654-009
DUP 7/13/2022	2207654-010
EB 7/13/2022	2207654-011
FB 7/13/2022	2207654-012
Trip Blank	2207654-013

SAMPLE NUMBERS TABLE





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 (\checkmark) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (\otimes) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (\bigcirc) 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)
- O 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)
- 8 Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicate (Items 20 and 21)
- ✓ Laboratory Duplicate (Item 22)

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-540-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 I 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, April 2022.



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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.

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:

 $\blacksquare \quad R > JB/U > NJ > J+/J- > J/UJ$

Data qualifiers used during this validation are included in the following table.

<u>Qualifier</u>	Definition
J	Estimated concentration
UJ	Estimated reporting limit
JB	Estimated concentration due to blank contamination
U	Evaluated to be undetected at the reporting limit
R	Rejected, data not usable

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 data package consisted of 1,558 data points. The data completeness calculation does not include any submitted blank sample results. A total of 15 data points were rejected. The data completeness measure for this data package is calculated to be 99.04% and is acceptable.



VALIDATION CRITERIA CHECKLIST							
1. Was the report free of non-conformances identified by the laboratory?	No						
Comments: The laboratory noted the following non-conformances regarding the analytical data.							
Method 8270C: "S" flags denote a surrogate or spike recovery outside of the standard limits.							
 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 detection limits appeared to be acceptable. The following dilutions were applied.							
Method 8260B: Dilutions of 50 times were applied for the VOC analysis of samples WMW-9 and WMW 500 times were applied for the benzene analysis of samples WMW-9 and WMW-2.	-2; and dilutions of						
Method 6010B: Dilutions of 5 to 100 times were applied for the dissolved calcium and sodium analyses	of select samples.						
Method 200.8: Dilutions of 5 times were applied for the uranium analysis of samples WMW-3, WMW-11	R, and WMW-7.						
Method 300.0: Dilutions of 5 to 100 times were applied for the anions analyses of select samples.							
SM 2320B: Dilutions of 2.5 times were applied for the alkalinity analyses of samples WMW-9 and WMV	V-2.						
Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC?	Yes						
Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reports constituents in accordance with the CoC.	rted the requested						
6. Were samples received in good condition within method-specified requirements?	Yes						
Comments: Samples were received on ice, in good condition, and with the cooler temperatures within t temperature range of $4^{\circ}C \pm 2^{\circ}C$ between 2.9°C and 4.2°C as noted on the Sample Log-In Check List.	he recommended						



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VALIDATION CRITERIA CHECKLIST										
7. Were samples ext technical holding t	racted/dige: times?	sted and analyzed within metho	d-specified	or	No					
Comments: The samp exceptions.	Comments: The samples were extracted/digested and/or analyzed within method-specific holding times, with the following exceptions.									
<u>SM 2320B</u> : Sample WMW-9 was analyzed for alkalinity analytes outside the method-specific holding time of 14 days by approximately 1 day. The alkalinity results were qualified J if detected and R if not detected in sample WMW-9.										
<u>SM 4500H+B</u> : 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.										
The samples were analyzed within the method-specific holding time for SM 2540C TDS analysis. The laboratory noted in an email to the project team that the analysis date shown in the laboratory report was when the sample was weighed; however, the sample was filtered before then within 7 days of collection. Qualification was not required based on this information.										
 Were reported uni method(s)? Speci 	ts appropria	ate for the sample matrix/matrice	es and analy	rtical	Yes					
Comments: The results were reported in concentration units of micrograms per liter (μ g/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 N/A acceptable limits?										
Comments: Initial and	continuing	calibration data were not include	ed as part o	f this data set.						
11. Was the total num the total number o	ber of labor f samples o	atory blank samples prepared e r analyzed as required by the m	equal to at le nethod?	east 5% of	Yes					
Comments: The total i samples.	number of la	aboratory blank samples prepar	ed was equ	al to at least 5% of the to	otal number of					
12. Were target analy	tes reported	as not detected in the laborato	ry blanks?		Yes					
Comments: Target and	alytes were	reported as not detected in the	laboratory b	olanks.						
13. Was the total num number of sample	ber of MS s s or analyze	amples prepared equal to at lea ed as required by the method?	ast 5% of the	e total	Yes					
Comments: The total r although MS samples analytical batch in this	number of n were not pre sample set	natrix spike samples prepared v epared/reported for all analyses has been indicated below.	vas equal to and/or batc	at least 5% of the total h. The matrix spike sar	number of samples, nple source for each					
	<u>Method</u>	<u>Analytes</u>	Batch	MS Sample Source						
	200.8	Total Uranium	B89608	Not Prepared						
	200.8	Total Uranium	68844	Not Prepared						
	300.0	Anions	R89511	Not Prepared						
	300.0	Nitrate + Nitrite as Nitrogen	R89840	Not Prepared						
	8260B	VOC	R89550	WMW-8						
	8270C	SVOC	68843	Not Prepared						
	7470A	Total Mercury	68877	Not Prepared						



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	VALIDATION CRITERIA CHECKLIST											
		Method		Analvtes	Batch	MS Sample Sou	rce					
	-	6010B	Dis	solved Metals	A89895	Not Prepared	 					
	_	2320B		Alkalinity	R89632	Not Prepared						
	_	2320B		Alkalinity	R89743	Not Prepared						
	2320B Alkalinity R89866 Not Prepared											
	_	2540C		TDS	68853	Not Prepared						
Not Prepared	– Matrix spike	es were not	prepared/r	eported for this batch.		· ·						
14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs Yes within data validation or laboratory quality control (QC) limits?												
Comments: The MS/MSD percent recoveries and RPDs for project samples were within laboratory QC limits.												
15. Was the total number of LCSs analyzed equal to at least 5% of the total number of Yes samples or analyzed as required by the method?												
Comments:	The total nu	umber of L	CS sampl	es analyzed was equ	al to at leas	t 5% of the total nu	mber of sample	€S.				
16. Were LO	CS/LCSD pe ory QC limits	ercent reco s?	veries an	d LCS/LCSD RPDs v	vithin data v	alidation or	No					
Comments: limits, with th	The LCS an	nd LCSD p exception.	ercent red	coveries and LCS/LC	SD RPDs v	vere within data vali	dation and labo	oratory QC				
Method 8270 14.7% at 16 estimated re	<u>)C</u> : The LC .6%. 4-Nitr eporting lin	S/LCSD R ophenol w nits due to	PD value as not do poor pre	e for 4-nitrophenol fi etected in the assoc ecision.	om batch iated sam	68843 exceeded th bles and was quali	e laboratory G fied as UJ to i	C limit of ndicate				
17. Were su	urrogate rec	overies wit	hin labora	tory QC limits?			No					
Commonto	Surragata		woro with	in loboratory OC limit	o with the	allowing executions						
Comments.	Mothod	Son		Surrogato			o.	1				
	8270C	<u>San</u>		2.4.6 Tribromonho		16.2%	19.6.120%					
	82700		W-5	2,4,0-Tribromophe		12.7%	18.6-129%					
	8270C		13/2022	2,4,0- Inbioinophe		8 /0%	15-8/ 5%					
	82700		3/2022	2 4 6-Tribromonbe	anol	1.66%	15-108%					
O M H	02700			2,4,0-1110101110011		1.00 /8	13-100 //	i 				
Since Metho target analyt base/neutral DUP-7/22/20	d 8270C su es in a give) were outsi 021, and qua	rrogate as n fraction (ide the acc alification o	sociations acid or ba eptance r of sample	were not available fr use/neutral) when two ange. This condition data was not required	om the labo or more su did not exis d, with the f	pratory, qualification irrogates from the s st for the samples W ollowing exception.	was assigned ame fraction (a /MW-7, WMW-	to all the cid or 9, and WG-				
Method 8270 DUP 7/13/20 sample DUF extremely lo	<u>)C</u> : The red)22 were les ? 7/13/2022 ow bias.	coveries o ss than 10 , and the r	f the acio %. The t esults wo	I fraction surrogates arget analytes asso ere assigned R qual	s 2-fluorop ciated with ifiers to ind	henol and 2,4,6-tri these surrogates licate rejected dat	bromophenol were not dete a due to evide	for sample cted in nce of				
Qualification samples wer	of sample of evaluated	data was n I based on	ot require their spec	d based on surrogate cific surrogate recove	non-confo ries.	mances in QC sam	ples as the env	/ironmental				
18. Were th collected project g	e number o d equal to a guidelines, (f trip blank t least 10% QAPP, SAF	field blar of the to P, or perm	nk, and/or equipment tal number of sample it?	blank samp s or as requ	les uired by the	Yes					
Comments: One trip blar were collecte	The numbe nk sample, T ed as part of	er of trip, fie Frip Blank, f this samp	eld, and eo one field le set.	quipment blanks colle blank sample, FB 7/1	cted was e 3/2022, and	qual to at least 10% d one equipment bla	of the number ank sample, EB	of samples. 7/13/2022,				
							7 7	rihydro				

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	,	ALIDATION C	RITERIA CHECKLIST			
19. Were target analytes reported as not detected in the trip blank, field blank, and/or Yes equipment blank samples?						
Comments: Targ exceptions.	et analytes were reported	as not detected	d in the trip, field, and equ	pment blanks, with	the following	
	Blank Sample ID]				
	Trip Blank	8260B	Acetone	2.6 µg/L	-	
	FB 7/13/2022	8260B	2-Butanone	5.2 μg/L		
	EB 7/13/2022	8260B	2-Butanone	4.2 μg/L		
	EB 7/13/2022	6010B	Silver, Dissolved	0.0012 mg/L	-	
detection. The 2-butanone qualifier.	result for EB 7/13/2022 v	vas less than t	he field blank detection	and the result was	assigned a U	
the results were assigned U qualifiers. The detection of dissolved silver in sample WMW-1R was greater than the reporting limit but less than 10 times the equipment blank concentration and the result was assigned a JB qualifier. The non-detect results for dissolved silver in associated samples did not require qualification. 20. Was the number of field duplicates collected equal to at least 10% of the total Yes						
Comments: The 7/13/2022 was cc	number of field duplicates nlected as a field duplicates	collected was e of sample WM	equal to at least 10% of th IW-5.	e number of sample	es. Sample DUP	
 Were field duplicate RPD values within data validation QC limits (soil 0-50%, water Yes 0-30%, or air 0-25%)? 						
Comments: As ir within data valida	ndicated in the Field Duplic tion QC limits of 0-30% fo	cate Summary T	Table at the end of this rep s.	oort, field duplicate F	RPD values were	
22. For laboratory duplicates prepared from project samples, were RPDs within data Yes validation or laboratory QC limits?						
validation or						
validation or Comments: A lat duplicate RPD wa	poratory duplicate was pre as within laboratory QC lin	pared for SM 2	540C TDS batch 68853 fr	om sample WMW-8	. The laboratory	
validation or Comments: A lat duplicate RPD wa 23. Were the foll	poratory duplicate was pre as within laboratory QC lin owing data relationships r	pared for SM 2 hits. ealistic?	540C TDS batch 68853 fr	om sample WMW-8	. The laboratory	
validation or Comments: A lat duplicate RPD wa 23. Were the foll • Target a EPH/827	poratory duplicate was pre as within laboratory QC lin owing data relationships r nalytes were reported by 70)?	pared for SM 2 nits. ealistic? more than one r	540C TDS batch 68853 from 100 method (e.g., 8260/8270,	om sample WMW-8	. The laboratory	
validation or Comments: A lat duplicate RPD wa 23. Were the foll • Target a EPH/827 Comments: Targ	poratory duplicate was pre as within laboratory QC lin owing data relationships r nalytes were reported by 70)? et analytes were not repo	pared for SM 2 nits. ealistic? more than one n	540C TDS batch 68853 fm method (e.g., 8260/8270, an one method.	om sample WMW-8	. The laboratory N/A	
validation or Comments: A lat <u>duplicate RPD wa</u> 23. Were the foll • Target a EPH/827 Comments: Targ • Both tota results w	poratory duplicate was pre as within laboratory QC lin owing data relationships r nalytes were reported by 70)? et analytes were not repo al and dissolved metals ar vere greater than or equal	pared for SM 2 nits. ealistic? more than one n rted by more that alyses were pe to the dissolved	540C TDS batch 68853 fm method (e.g., 8260/8270, an one method. rformed, and the total me d metals results?	om sample WMW-8	. The laboratory N/A N/A	



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Client Sample ID: WMW-5 Field Duplicate Sample ID: DUP 7/13/2022						
Analyte	Method	Laboratory Result	Duplicate Result	Relative Percent Difference (RPD)		
Chloride	300.0	450 mg/L	450 mg/L	0.0%		
Nitrogen, Nitrate	300.0	0.27 mg/L	ND (1.0 mg/L)	DL		
Sulfate	300.0	2,200 mg/L	2,200 mg/L	0.0%		
Uranium	200.8	0.021 mg/L	0.018 mg/L	15.4%		
Barium, Dissolved	6010B	0.0053 mg/L	0.0050 mg/L	5.8% +/-RL		
Calcium, Dissolved	6010B	220 mg/L	220 mg/L	0.0%		
Selenium, Dissolved	6010B	0.047 mg/L	0.039 mg/L	18.6% +/-RL		
Silver, Dissolved	6010B	0.0037 mg/L	0.0042 mg/L	12.7% +/-RL		
Sodium, Dissolved	6010B	1,200 mg/L	1,200 mg/L	0.0%		
pН	4500-H+B	7.47 Std Units	7.73 Std Units	3.4%		
Bicarbonate	2320B	717.6 mgCaCO₃/L	730.8 mgCaCO₃/L	1.8%		
Total Alkalinity	2320B	717.6 mgCaCO₃/L	730.8 mgCaCO ₃ /L	1.8%		
TDS	2320B	4,170 mg/L	4,250 mg/L	1.9%		

FIELD DUPLICATE SUMMARY

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.



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DATA QUALIFICATION SUMMARY

Abbreviation	Reason
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.
EBD	Equipment blank detection
FBD	Field blank detection
MDLRL	Flagged by the laboratory: The result was greater than the MDL but less than the RL.
ERPD-LCS	The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision.

Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
1,2,4-Trimethylbenzene	SW8260B	WMW-2	2207654-009a	31	50	µg/L	J	MDLRL
1-Methylnaphthalene	SW8270C	WMW-2	2207654-009b	4.6	5	µg/L	J	MDLRL
2,4,5-Trichlorophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
2,4,6-Trichlorophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
2,4-Dichlorophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	5	µg/L	R	LR-SUR
2,4-Dimethylphenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
2,4-Dinitrophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	20	µg/L	R	LR-SUR
2-Butanone	SW8260B	EB 7/13/2022	2207654-011a	4.2	10	µg/L	U	FBD, MDLRL
2-Butanone	SW8260B	FB 7/13/2022	2207654-012a	5.2	10	µg/L	J	MDLRL
2-Chlorophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	5	µg/L	R	LR-SUR
2-Methylphenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
2-Nitrophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
3,4-Methylphenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
4,6-Dinitro-2-methylphenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	LR-SUR
4-Chloro-3-Methylphenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	5	μg/L	R	LR-SUR
4-Nitrophenol	SW8270C	WMW-8	2207654-001b	ND	10	μg/L	UJ	ERPD-LCS



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Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
4-Nitrophenol	SW8270C	WMW-3	2207654-002b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-6	2207654-003b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-1R	2207654-004b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-5	2207654-005b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-7	2207654-006b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-9	2207654-007b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-4	2207654-008b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	WMW-2	2207654-009b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	EB 7/13/2022	2207654-011b	ND	10	µg/L	UJ	ERPD-LCS
4-Nitrophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	10	µg/L	R	ERPD-LCS, LR-SUR
Acetone	SW8260B	Trip Blank	2207654-013a	2.6	10	µg/L	J	MDLRL
Alkalinity	SM2320B	WMW-9	2207654-007C	1376	50	mg/L CaCO3	J	HT-AN
Arsenic, Dissolved	SW6010B	WMW-8	2207654-001E	0.02	0.02	mg/L	J	MDLRL
Barium, Dissolved	SW6010B	WMW-5	2207654-005E	0.0053	0.02	mg/L	J	MDLRL
Barium, Dissolved	SW6010B	DUP 7/13/2022	2207654-010E	0.005	0.02	mg/L	J	MDLRL
Bicarbonate as CaCO3	SM2320B	WMW-9	2207654-007C	1376	50	mg/L CaCO3	J	HT-AN
Carbonate	SM2320B	WMW-9	2207654-007C	ND	5	mg/L CaCO3	R	HT-AN
Ethylbenzene	SW8260B	WMW-9	2207654-007a	35	50	µg/L	J	MDLRL
Naphthalene	SW8260B	WMW-2	2207654-009a	26	100	µg/L	J	MDLRL
Nitrogen, Nitrate	E300	WMW-5	2207654-005C	0.27	1	mg/L	J	MDLRL
Pentachlorophenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	40	µg/L	R	LR-SUR
рН	SM 4500-H+ B	WMW-8	2207654-001C	7.96		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-3	2207654-002C	7.76		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-6	2207654-003C	7.99		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-1R	2207654-004C	7.48		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-5	2207654-005C	7.47		Std Units	J	HT-AN



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Analyte	Method	Field Sample ID	Lab Sample ID	Result	Limit	Units	Reviewer Qualifier	DV Flag Reasons
рН	SM 4500-H+ B	WMW-7	2207654-006C	8.27		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-9	2207654-007C	8.09		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-4	2207654-008C	8.02		Std Units	J	HT-AN
рН	SM 4500-H+ B	WMW-2	2207654-009C	7.91		Std Units	J	HT-AN
рН	SM 4500-H+ B	DUP 7/13/2022	2207654-010C	7.73		Std Units	J	HT-AN
рН	SM 4500-H+ B	EB 7/13/2022	2207654-011C	6.16		Std Units	J	HT-AN
Phenol	SW8270C	DUP 7/13/2022	2207654-010b	ND	20	µg/L	R	LR-SUR
Selenium, Dissolved	SW6010B	WMW-8	2207654-001E	0.038	0.05	mg/L	J	MDLRL
Selenium, Dissolved	SW6010B	WMW-6	2207654-003E	0.041	0.05	mg/L	J	MDLRL
Selenium, Dissolved	SW6010B	WMW-5	2207654-005E	0.047	0.05	mg/L	J	MDLRL
Selenium, Dissolved	SW6010B	WMW-4	2207654-008E	0.047	0.05	mg/L	J	MDLRL
Selenium, Dissolved	SW6010B	DUP 7/13/2022	2207654-010E	0.039	0.05	mg/L	J	MDLRL
Selenium, Dissolved	SW6010B	WMW-1R	2207654-004E	0.0065	0.005	mg/L	JB	EBD
Silver, Dissolved	SW6010B	WMW-3	2207654-002E	0.0019	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	WMW-6	2207654-003E	0.0013	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	WMW-5	2207654-005E	0.0037	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	WMW-7	2207654-006E	0.0011	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	WMW-2	2207654-009E	0.001	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	DUP 7/13/2022	2207654-010E	0.0042	0.005	mg/L	U	EBD, MDLRL
Silver, Dissolved	SW6010B	EB 7/13/2022	2207654-011E	0.0012	0.005	mg/L	J	MDLRL
Xylenes, Total	SW8260B	WMW-9	2207654-007a	51	75	µg/L	J	MDLRL



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District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Action 144108

CONDITIONS

Operator:		OGRID:		
	Western Refining Southwest LLC	267595		
	539 South Main Street	Action Number:		
	Findlay, OH 45840	144108		
		Action Type:		
		[UF-DP] Discharge Permit (DISCHARGE PERMIT)		

CONDITIONS

Created By Condition Condition Date Per 9/27/22 email to Mr. John Moore, must test for arsenic at applicable WQCC standard of (0.01mg/L) during all subsequent groundwater monitoring scwells 10/17/2022 events.