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**REVIEWED**

By Mike Buchanan at 4:23 pm, Sep 20, 2023

Your ref: 1RP-4643

Our ref: 12603937-Velez-1

August 11, 2023

Mr. Nelson Velez  
State of New Mexico  
Energy, Minerals, and Natural Resources Department  
New Mexico Oil Conservation Division  
811 South First Street  
Artesia, New Mexico 88210

2022 Annual Groundwater Monitoring Report  
O-6-1 4"  
Lea County, New Mexico  
New Mexico Oil Conservation Division Remediation Case No. 1RP-4643  
Incident Number nOY1707428250

Dear Mr. Velez:

On behalf of ETC Texas Pipeline Ltd. (ETC), GHD Services Inc. (GHD) is submitting the 2022 Annual Groundwater Monitoring Report (Report) for the above-referenced property (Site) to the New Mexico Oil Conservation Division (NMOCD). The Report summarizes activities performed at the Site during 2022 and in March 2023 in accordance with the NMOCD's recommendations in response to the 2021 Annual Groundwater Monitoring Report.

Should you have any questions or comments regarding this submittal, please contact the undersigned.

Regards,

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BO/mss/1

Copy To:: Stacy Boultinghouse, Energy Transfer  
David Gallegos, New Mexico State Land Office (property owner)

Review of the 2022 Annual Groundwater Monitoring Report for O-6-1 4": **Content is Unsatisfactory**

1. ETC Texas Pipeline must request soil closure per 19.15.29 of NMAC under the C-141 and provide a closure report for only the soil portion of this incident.

2. If ETC also wishes to request closure for the groundwater incident, it must submit a separate closure report under GWA as part per 19.15.30.19 Subsection (A) and (B), separate from soil, in e-permitting. Director Approval of the NMOCD will be required after submittal of the groundwater incident.

3. Please continue monitoring groundwater and submit report for 2023 no later than April 1, 2024.



# **2022 Annual Groundwater Monitoring Report**

**O-6-1 4"**

**Lea County, New Mexico**

**NMOCD 1RP-4643**

**Incident Number nOY1707428250**

ETC Texas Pipeline, Ltd

August 11, 2023

➔ **The Power of Commitment**

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# 1. Introduction

This report presents the results of groundwater monitoring activities performed during 2022 by GHD Services Inc. (GHD) at the ETC Texas Pipeline, Ltd. (ETC) O-6-1 4" pipeline release site (Site). The Site is located at 32°33'25.4" North and 103°16'21.2" West, within Unit J, Section 20, Township 20 South, Range 37 East, approximately 4.5 miles south of Monument, Lea County, New Mexico (**Figure 1**). The property on which the Site is located is owned by the New Mexico State Land Office (NMSLO). The Site is regulated by the New Mexico Oil Conservation Division (NMOCD) under remediation case No. 1RP-4643 (associated with incident number nOY1707428250).

## 1.1 Site Background

On March 13, 2017, ETC reported a release of approximately 150 barrels (bbls) of natural gas liquids/oil to the (NMOCD) via Form C-141. The NMOCD then notified the NMSLO. Based on ETC's initial investigation, external corrosion caused an approximate 1-inch hole to develop on a section of the O-6-1 pipeline, which was the cause of the release. Initial response actions including excavation of impacted soils and confirmation soil sampling were conducted in March 2017. Based on the product released, it was determined that the constituents of concern (COCs) to be evaluated at the Site were benzene, toluene, ethylbenzene, total xylenes (BTEX), total petroleum hydrocarbons (TPH), and chloride.

Between August 2017 and January 2020, soil and groundwater assessments and remediation events have been conducted at the Site, including advancing ten soil borings for vertical and horizontal delineation, installing five groundwater monitoring wells (MW-1 through MW-5), installing two air sparge wells, conducting two soil vapor extraction and air sparge pilot studies in 2018, and performing three mobile dual-phase extraction (MDPE) events in 2019. Details of these events can be found in previous reports prepared for this Site; however, a summary of the events and their respective results are provided below.

The soil assessments indicated that concentrations of total petroleum hydrocarbons (TPH) and chloride remain in the soil at the Site above their respective Site-specific Recommended Remedial Action Limits (RRAL) of 100 and 600 milligrams per kilogram (mg/kg), respectively, as per the New Mexico Administrative Code (NMAC), Title 19, Chapter 15, Part 29 (19.15.29). The residual concentrations of TPH are in DP-5; 110 and 120 mg/kg at 5 and 10 feet below ground surface (bgs), respectively. The residual concentrations of chloride are in MW-1 and DP-1; 1,100 mg/kg and 750 mg/kg at 15-17 and 20 ft bgs, respectively. A summary of soil analytical results is presented as **Table 1**.

The initial groundwater assessment in 2017 at MW-1 indicated concentrations of benzene, chloride, and total dissolved solids (TDS) were detected in exceedance of their respective New Mexico Water Quality Control Commission (NMWQCC) standards. As a result, GHD installed four additional monitoring wells (MW-2 through MW-5) and two air sparge (AS) wells at the Site between December 18, 2017, and January 31, 2018. Light non-aqueous phase liquid (LNAPL) has never been observed in the monitoring wells at the Site.

The data and observations from the 2017 pilot studies indicated that AS/SVE could successfully remove petroleum hydrocarbons from the impacted subsurface; however, due to difficulties accessing electricity the system was not installed and no additional SVE or AS efforts were completed. Three MDPE events were performed at the Site in 2018 and 2019 in place of AS/SVE. The MDPE events successfully destroyed approximately 1.97 equivalent gallons of hydrocarbons as vapors and removed 1,622 gallons of impacted groundwater.

Since 2018, quarterly groundwater monitoring events have been conducted at the Site and samples were analyzed for BTEX, chloride, and TDS. The events were decreased to semi-annual in 2022. Additionally, BTEX was dropped from the sampling plan in 2022 as concentrations have been below NMWQCC standards for eight consecutive quarters.

In March 2022, at request of NMOCD, a sixth groundwater monitoring well MW-6 was installed upgradient of the existing well network and approximate release point to confirm and better understand background concentrations of COCs at the Site. The installation of this well and the semi-annual groundwater monitoring completed in 2022 as well as the March 2023 groundwater monitoring event are discussed in this report.

## 1.2 Site Characterization

According to the New Mexico Bureau of Geology and Mineral Resources Interactive Resources Map, the Site is situated in an area of recent Quaternary eolian and piedmont deposits. Soils typically found in this area consist poorly graded sand and gravels cemented by calcium carbonate.

Groundwater at the Site is encountered at approximately 50 ft bgs and is unconfined. The groundwater gradient is generally to the southeast.

## 2. Monitoring Well Installation

On March 10, 2022, the State of New Mexico Office of the State Engineer issued permit number L-15274 for the approval to drill one well for non-consumptive purposes. GHD subcontracted drilling activities to White Drilling Company, Inc. (White), who advanced one boring, MW-6, at the Site on March 14, 2022. The drilling activities included the following tasks.

- Prior to drilling activities, underground utilities at the Site were marked by utility operators in accordance with the State of New Mexico damage prevention laws. Additionally, an air knife was used to clear the boring to 4 ft bgs.
- The soil boring was advanced to 33 ft bgs via rotary drill rig and open-barrel, single-tubes with soil core liners to collect soil for sampling and observing soil lithology.
- Upon retrieval from sampling equipment, a representative soil sample (S-12574712-CN-MW-6-25') was placed in laboratory-provided containers, which were immediately labelled, sealed, stored in a cooler containing ice. The sample was transported under chain-of-custody documentation to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for laboratory analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015M/D, and chloride via EPA Method 300.0.
- Additionally, separate aliquot of soil samples collected from along the soil cores were placed in a sealed bag and allowed to equilibrate to ambient temperature. The atmosphere within the sealed bag was subsequently screened for the presence of volatile organic compounds with a photoionization detector (PID). The soil cores were also inspected for olfactory and visual evidence of impacts such as staining, sheen, or odors. Groundwater was encountered during drilling at 25 ft bgs.
- Following the completion of drilling activities, the soil boring was constructed into a groundwater monitoring well using two-inch I.D. polyvinylchloride 0.010 slot well screen and solid riser pipe. The annular space between the well screen and the boring wall was filled with clean, 20/40 silica sand from the base of the well to just above the top of well screen. The remaining annular space was sealed using hydrated bentonite chips to approximately 10 ft bgs and switching to Type 2 Portland Cement with 5% bentonite grout to the ground surface. The monitoring well was protected with a steel, flush mount cover set in concrete at the surface. Monitoring well construction details are provided on the boring/monitoring well log provided as **Appendix A**.
- Drilling and sampling equipment were decontaminated prior to each use. GHD personnel donned new nitrile gloves prior to handling each sample.
- White mailed the well record and log to the State of New Mexico Office of the State Engineer on March 14, 2022.

In general, soils at the Site consisted of sands, with sandstone observed around 2 to 9 ft bgs. The groundwater-bearing unit was encountered at approximately 25 ft bgs in the yellow, brown sand observed from 9 to 32 ft bgs. Clayey sands underlain the yellow, brown sand to 33 ft bgs. No elevated PID readings or staining/odors were observed during field screening in the boring. Lithology, field screening results, sample depths, and related details are noted on the attached boring log in **Appendix A**.

Soil analytical results for the sample collected from 25 ft bgs indicated BTEX, TPH, and chloride were not detected at concentrations that met or exceeded the laboratory reporting limits. A summary of soil analytical results is presented in **Table 1**. The analytical laboratory report for the soil sample is provided in **Appendix B**.

### 3. Groundwater Monitoring

GHD performed semi-annual groundwater monitoring events Site on March 17 and August 30, 2022 and March 3, 2023. The monitoring program including groundwater gauging and collecting groundwater samples from MW-1 through MW-6. The March 2023 event is included in this report to support the recommendation for Site closure (Section 4.2).

#### 3.1 Monitoring Well Gauging

On March 17 and August 30, 2022, and March 3, 2023, GHD personnel measured the depth to groundwater in the wells indicated above using an electronic oil/water interface probe (IP). The IP was cleaned with laboratory grade soap and purified water prior to gauging each monitoring well. Depth to groundwater and calculated groundwater elevations are summarized in **Table 2**.

Based on the data collected in 2022, groundwater flow is generally southeast and is consistent with historical data for the Site. The groundwater gradient was calculated to be approximately 0.0024 ft/ft in March and at 0.0025 ft/ft in August. Groundwater potentiometric surface maps are presented as **Figure 3** and **Figure 4**. Groundwater gradient and potentiometric surface maps for March 2023 will be presented in the 2023 Annual Groundwater Monitoring Report.

#### 3.2 Groundwater Sampling

Following gauging during each 2022 event and the March 2023 event, GHD collected groundwater samples from MW-1 through MW-6. Prior to sampling, GHD personnel utilized dedicated polyethylene bailers to purge a minimum of three well volumes of groundwater or until the well was dry. The wells were given time to recover prior to collecting a groundwater sample. Groundwater quality parameters of temperature, pH, oxidation reduction potential, and conductivity were collected with a field-calibrated multi-parameter groundwater quality meter and recorded on groundwater sampling forms. A summary of field parameters is presented in **Table 3**.

Groundwater samples were collected, placed in laboratory-prepared sample containers, packed in a cooler with ice, and shipped under chain-of-custody documentation to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for chloride via EPA Method 300.0 and TDS via Standard Method 2540. The sample from MW-6 was also analyzed for BTEX via EPA Method 8260. MW-1 through MW-5 were not analyzed for BTEX as concentrations of BTEX in samples from those wells have been below NMWQCC standards for eight consecutive quarters.

#### 3.3 Quality Assurance/Quality Control

During each groundwater monitoring event, a field duplicate was collected as a Quality Assurance/Quality Control (QA/QC) sample and subsequently submitted for laboratory analysis. A trip blank was also submitted as a QA/QC sample for each groundwater monitoring event.

#### 3.4 Analytical Results

The NMWQCC mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the NMAC (20.6.2.3103 NMAC). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use.

The groundwater analytical results for 2022 and March 2023 are summarized in **Table 4** and the corresponding laboratory analytical reports are included in **Appendix B**. A COC concentration map is presented as **Figure 5**. A summary of results is discussed below.

- BTEX was not detected at concentrations above laboratory detection limits in the groundwater samples collected from MW-6 during 2022 and March 2023.
- Chloride and TDS were detected at concentrations that exceeded their NMWQCC standards in all groundwater samples collected from the six wells during each sampling event in 2022 and March 2023.

## 4. Summary and Recommendations

### 4.1 Summary

The following summarizes the information and data presented in this report.

- MW-6 was installed upgradient of the existing well network on March 14, 2022, to confirm and better understand background concentrations of COCs at the Site.
- Soil analytical results from MW-6 indicated BTEX, TPH, and chloride were not detected at concentrations that met or exceeded laboratory reporting limits.
- Concentrations of chloride and TDS in exceedance of the NMWQCC standards were detected in all groundwater samples collected from MW-1 through MW-6.
- The concentrations of chloride and TDS in MW-6 are similar to those detected in MW-1 through MW-5, which leads GHD to believe that the concentrations of chloride and TDS at the Site represent the regional background levels.

### 4.2 Recommendations

On behalf of ETC, GHD is requesting closure for the Site (NMOCD 1RP-4643, Incident Number nOY1707428250) based on the following.

- Residual TPH in Site soils were only detected in DP-5 at concentrations of 110 and 120 mg/kg, just above the Site-specific RRAL of 100 mg/kg. These detections were at 5 to 10 ft bgs, respectively, which is approximately 10 to 15 feet above the groundwater at the Site.
- Residual chloride in Site soils were only detected in MW-1 and DP-1; 1,100 mg/kg and 750 mg/kg at 15-17 and 20 ft bgs, respectively, which are in exceedance of the Site-specific RRAL of 600 mg/kg.
- Concentrations of BTEX in groundwater samples collected from Site wells MW-1 through MW-5 have been below NMWQCC standards for eight consecutive quarters. BTEX was not detected in MW-6 for either sampling event in 2022 or in March 2023.
- Chloride and TDS concentrations in groundwater at the Site remain in exceedance of NMWQCC standards; however, the groundwater samples collected from the new, upgradient monitoring well MW-6 in 2022 and March 2023 had detected concentrations of chloride and TDS similar to the concentrations in MW-1 through MW-5, leading GHD to conclude the concentrations of chloride and TDS at the Site represent the regional background levels.
- The Site is located in a remote area surrounded by other oil and gas operations, whereby the only human presence at the Site would be related to subgrade pipeline repair.
- Based on the above, the concentrations of TPH and chloride remaining in soil and chloride and TDS remaining in groundwater do not appear to pose an immediate threat to human life or the environment.



Table 1  
Summary of Soil Analytical Results  
O-6-1 4”  
Lea County, New Mexico  
ETC Texas Pipeline, Ltd.  
1RP-4643

Sample Location	Date	Sample Depth (ft)	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	Total Petroleum Hydrocarbons (TPH)				Chloride
								TPH GRO (C6-C10)	TPH DRO (C10-C28)	TPH ORO (C28-C36)	Total TPH (C6-C36)	
NMAC Soil Closure Criteria			10	ne			50	ne			100	600
Floor	3/7/2017	15.5	0.084	0.570	0.974	2.62	4.248	45.6	96.2	71.5	213	32
Floor Middle Hole	3/8/2017	15.5	<0.050	0.076	0.21	0.692	0.978	12.1	51.7	68.4	132	16
MW-1	8/29/2017	15-17	0.032	<0.048	<0.048	<0.096	0.032	<4.8	<9.8	<49	<63.6	1,100
MW-1	8/29/2017	20-22	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.4	<47	<61.4	170
MW-1	8/29/2017	25-27	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.7	<46	<62.4	81
BN-2	8/29/2017	15	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.2	<46	<59.9	210
BN-2	8/29/2017	20	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.4	<47	<61.1	130
BW	8/29/2017	15	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.3	<47	<61.1	430
BW	8/29/2017	20	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.5	<48	<62.3	54
BS	8/30/2017	15	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.5	<47	<61.4	360
BS	8/30/2017	20	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.1	<46	<59.8	140
BE-2	8/30/2017	15	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.7	<48	<62.6	75
BE-2	8/30/2017	20	<0.023	<0.046	<0.046	<0.091	<0.206	<4.6	<9.5	<48	<62.1	72
MW-2	12/18/2017	5	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.8	<49	<63.5	36
MW-2	12/18/2017	10	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.0	<45	<58.6	86
MW-2	12/18/2017	20	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.8	<48	<62.5	57
MW-3	12/19/2017	15	<0.023	<0.047	<0.047	<0.094	<0.211	<4.6	<9.6	<48	<62.2	140
MW-3	12/19/2017	20	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<10	<50	<64.8	120
MW-3	12/19/2017	35	<0.025	<0.050	<0.050	<0.010	<0.225	<5.0	<9.6	<48	<62.6	90
MW-4	12/19/2017	10	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.8	<49	<63.6	46
MW-4	12/19/2017	15	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.8	<49	<63.5	35
MW-4	12/19/2017	20	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.9	<49	<63.7	130
MW-5	12/20/2017	10	<0.025	<0.050	<0.050	<0.010	<0.225	<5.0	<9.5	<48	<62.5	<30
MW-5	12/20/2017	20	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.5	<48	<62.3	<30
MW-5	12/20/2017	25	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.4	<47	<61.1	73
AS-1	12/20/2017	10	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.9	<50	<64.7	46
AS-1	12/20/2017	15	<0.023	<0.046	<0.046	<0.093	<0.208	<4.6	<9.3	<46	<59.9	50
AS-1	12/20/2017	20	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.5	<47	<61.2	97
AS-2	12/21/2017	10	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.8	<49	<63.7	<30
AS-2	12/21/2017	15	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.3	<47	<60.9	<30
AS-2	12/21/2017	20	<0.024	<0.049	<0.049	<0.097	<0.220	<4.9	<9.5	<48	<62.4	<30
DP-1	7/14/2020	5	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.9	<50	<64.8	<60
DP-1	7/14/2020	10	<0.12	<0.24	<0.24	<0.49	<1.09	<24	<8.7	<44	<76.7	<60
DP-1	7/14/2020	15	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.6	<48	<62.4	69
DP-1	7/14/2020	20	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.7	<48	<62.5	750
DP-2	7/14/2020	5	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<8.8	<44	<62.2	<60
DP-2	7/14/2020	10	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.9	<50	<64.6	<60
DP-2	7/14/2020	15	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.2	<46	<60.1	<60
DP-2	7/14/2020	20	<0.023	<0.046	<0.046	<0.093	<0.208	<4.6	<9.6	<48	<62.2	78



Table 1  
Summary of Soil Analytical Results  
O-6-1 4”  
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Sample Location	Date	Sample Depth (ft)	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	Total Petroleum Hydrocarbons (TPH)				Chloride
								TPH GRO (C6-C10)	TPH DRO (C10-C28)	TPH ORO (C28-C36)	Total TPH (C6-C36)	
NMAC Soil Closure Criteria			10	ne			50	ne			100	600
DP-3	7/14/2020	5	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<9.4	<47	<61.1	<60
DP-3	7/14/2020	10	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.4	<47	<61.1	<60
DP-3	7/14/2020	15	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.5	<47	<61.1	<60
DP-3	7/14/2020	20	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.7	<49	<63.6	<60
DP-4	7/14/2020	5	<0.025	<0.050	<0.050	<0.100	<0.225	<5.0	<9.5	<47	<61.5	<60
DP-4	7/14/2020	10	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.5	<48	<62.4	<60
DP-4	7/14/2020	15	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<50	<64.8	<60
DP-4	7/14/2020	20	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.3	<46	<60.0	83
DP-5	7/14/2020	5	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	10	100	110	<60
DP-5	7/14/2020	10	<0.025	<0.050	<0.050	<0.100	<0.225	<5.0	10	110	120	<60
DP-5	7/14/2020	15	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.2	<46	<60.2	<60
DP-5	7/14/2020	20	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.3	<47	<61.2	<60
MW-6	3/13/2022	25	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.6	<48	<62.6	<60

- Notes:
- 1) Analytical results are presented in milligrams per kilogram (mg/kg).
  - 2) NMAC - New Mexico Administrative Code
  - 3) ft - feet     ne - not established
  - 4) GRO - gasoline range organics, DRO - diesel range organics, ORO - oil range organics
  - 5) < - Analyte was not detected at or above the laboratory reporting limit.
  - 6) Bolded/shaded results exceed their respective NMAC Closure Criteria for Soils Impacted by a Release (Title 19, Chapter 15, Part 29; Table I) where depth to groundwater is 50 ft below ground surface or less.

Table 2

**Summary of Groundwater Gauging and Elevation Data  
O-6-1 4"  
Lea County, New Mexico  
ETC Texas Pipeline, Ltd.  
1RP-4643**

Well ID	TOC Elevation (ft AMSL)	Date	Depth to Water (ft below TOC)	Groundwater Elevation (ft AMSL)
MW-1	3520.29	9/20/2017	24.70	3495.59
		10/17/2017	24.60	3495.69
		1/4/2018	24.43	3495.86
		4/2/2018	24.34	3495.95
		4/12/2018	24.33	3495.96
		4/26/2018	24.64	3495.65
		7/24/2018	24.96	3495.33
		10/1/2018	25.03	3495.26
		3/28/2019	24.37	3495.92
		6/27/2019	24.63	3495.66
		9/25/2019	25.02	3495.27
		12/4/2019	24.82	3495.47
		2/25/2020	24.51	3495.78
		5/12/2020	24.27	3496.02
		8/19/2020	24.95	3495.34
		11/16/2020	25.15	3495.14
		4/1/2021	25.03	3495.26
		6/16/2021	25.09	3495.20
		9/14/2021	25.22	3495.07
		11/29/2021	25.3	3494.99
		3/17/2022	25.24	3495.05
		8/30/2022	25.62	3494.67
		3/7/2023	25.30	3494.99
MW-2	3520.42	1/4/2018	24.53	3495.76
		4/2/2018	24.41	3495.88
		4/12/2018	24.40	3496.02
		4/26/2018	24.53	3495.89
		7/24/2018	24.86	3495.56
		10/1/2018	25.13	3495.29
		3/28/2019	24.49	3495.93
		6/27/2019	24.71	3495.71
		9/25/2019	25.10	3495.32
		12/4/2019	24.96	3495.46
		2/25/2020	24.62	3495.80
		5/12/2020	24.35	3496.07
		8/19/2020	25.05	3495.37
		11/16/2020	25.25	3495.17
		4/1/2021	25.13	3495.29
		6/16/2021	25.20	3495.22
		9/14/2021	25.33	3495.09
		11/29/2021	25.31	3495.11
		3/17/2022	25.33	3495.09
		8/30/2022	25.73	3494.69
		3/7/2023	25.40	3495.02

Table 2

**Summary of Groundwater Gauging and Elevation Data**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	TOC Elevation (ft AMSL)	Date	Depth to Water (ft below TOC)	Groundwater Elevation (ft AMSL)
MW-3	3520.45	1/4/2018	24.79	3495.66
		4/2/2018	24.34	3496.11
		4/12/2018	24.34	3496.11
		4/26/2018	24.77	3495.68
		7/24/2018	25.24	3495.21
		10/1/2018	25.40	3495.05
		3/28/2019	24.74	3495.71
		6/27/2019	24.96	3495.49
		9/25/2019	25.35	3495.10
		12/4/2019	25.12	3495.33
		2/25/2020	24.86	3495.59
		5/12/2020	24.61	3495.84
		8/19/2020	25.32	3495.13
		11/16/2020	25.50	3494.95
		4/1/2021	25.36	3495.09
		6/16/2021	25.46	3494.99
		9/14/2021	25.80	3494.65
		11/29/2021	25.65	3494.80
		3/17/2022	25.59	3494.86
		8/30/2022	26.00	3494.45
		3/7/2023	25.66	3494.79
MW-4	3520.35	1/4/2018	24.65	3495.70
		4/2/2018	24.54	3495.81
		4/12/2018	24.50	3495.85
		4/26/2018	24.42	3495.93
		7/24/2018	25.09	3495.26
		10/1/2018	25.25	3495.10
		3/28/2019	24.60	3495.75
		6/27/2019	24.83	3495.52
		9/25/2019	25.41	3494.94
		12/4/2019	24.98	3495.37
		2/25/2020	24.72	3495.63
		5/12/2020	24.45	3495.90
		8/19/2020	25.17	3495.18
		11/16/2020	25.35	3495.00
		4/1/2021	25.03	3495.32
		6/16/2021	25.32	3495.03
		9/14/2021	25.45	3494.90
		11/29/2021	25.52	3494.83
		3/17/2022	25.44	3494.91
		8/30/2022	25.83	3494.52
		3/7/2023	25.51	3494.84

Table 2

**Summary of Groundwater Gauging and Elevation Data**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	TOC Elevation (ft AMSL)	Date	Depth to Water (ft below TOC)	Groundwater Elevation (ft AMSL)
MW-5	3520.57	1/4/2018	24.70	3495.87
		4/2/2018	24.58	3495.99
		4/12/2018	24.56	3496.01
		4/26/2018	24.68	3495.89
		7/24/2018	25.13	3495.44
		10/1/2018	25.31	3495.26
		3/28/2019	24.63	3495.94
		6/27/2019	24.87	3495.70
		9/25/2019	25.29	3495.28
		12/4/2019	25.04	3495.53
		2/25/2020	24.76	3495.81
		5/12/2020	24.54	3496.03
		8/19/2020	25.19	3495.38
		11/16/2020	24.43	3496.14
		4/1/2021	25.30	3495.27
		6/16/2021	25.36	3495.21
		9/14/2021	25.51	3495.06
		11/29/2021	25.58	3494.99
		3/17/2022	25.49	3495.08
		8/30/2022	25.90	3494.67
		3/7/2023	25.57	3495.00
MW-6	not surveyed	3/17/2022	25.69	--
		8/30/2022	26.07	--
		3/7/2023	25.75	--

## Notes:

- 1) ft AMSL - feet above mean sea level
- 2) TOC - top of casing

Table 3

**Summary of Groundwater Field Parameters**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)
MW-1	9/20/2017	19.79	6.83	2,300	0.42	-152
	10/17/2017	19.66	7.11	2,590	1.88	-192
	1/4/2018	19.11	6.75	2,610	2.59	-241
	4/12/2018	18.80	7.32	2,840	9.37	15.8
	4/26/2018	17.86	7.18	3,640	--	--
	7/24/2018	17.62	7.06	2,590	2.95	--
	10/1/2018	22.01	7.51	2,340	0.86	11.4
	3/28/2019	17.27	7.03	5,150	1.84	-48.3
	6/27/2019	19.40	7.14	2,800	--	--
	9/25/2019	17.36	7.23	--	--	-73.0
	12/4/2019	18.71	7.03	2,900	1.93	-260
	2/25/2020	18.50	7.41	2,710	2.15	61.2
	5/12/2020	18.50	10.89	3,250	1.20	-213
	8/19/2020	20.60	6.77	2,840	1.98	76.8
	11/16/2020	20.46	7.44	3,090	2.27	115
	4/1/2021	18.79	7.49	2,320	1.45	33.6
	6/16/2021	22.70	7.46	1,800	1.56	106
	9/14/2021	20.79	7.48	1,730	1.42	76.8
	11/29/2021	20.44	7.37	2,930	1.51	61.0
	3/17/2022	19.55	7.44	2,660	2.38	197
	8/30/2022	20.22	7.67	1,990	2.06	222
	3/7/2023	22.79	7.14	285	3.96	83.1
MW-2	1/4/2018	19.07	7.08	2,630	2.90	-192
	4/12/2018	18.08	7.34	2,960	6.98	-50.6
	4/26/2018	17.58	7.27	3,730	--	--
	7/24/2018	18.15	6.63	2,560	3.13	--
	10/1/2018	23.29	7.68	2,330	1.32	59.8
	3/28/2019	16.89	7.00	5,070	2.54	-29.9
	6/27/2019	19.00	7.09	2,720	--	66.0
	9/25/2019	17.93	7.24	--	--	-40.6
	12/4/2019	--	--	--	--	--
	2/25/2020	19.10	7.42	2,900	2.76	73.4
	5/12/2020	18.20	7.33	3,250	1.95	-10.2
	8/19/2020	20.10	6.81	3,190	1.97	12.0
	11/16/2020	20.03	7.33	3,400	1.63	127
	4/1/2021	19.24	7.48	2,450	2.57	38.8
	6/16/2021	19.58	7.44	2,010	2.64	93.3
	9/14/2021	20.12	7.25	2,030	2.40	73.2
	11/29/2021	19.73	7.35	3,370	2.97	60.2
	3/17/2022	19.24	7.42	2,890	3.30	199
	8/30/2022	19.95	7.44	2,090	2.31	232
	3/9/2023	22.83	7.31	--	5.41	85.3

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Table 3

**Summary of Groundwater Field Parameters**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)
MW-3	1/4/2018	19.20	7.23	2,640	3.67	-138
	4/12/2018	18.36	7.31	2,980	10.99	-61.6
	4/26/2018	18.00	7.26	3,880	--	--
	7/24/2018	17.90	7.12	2,750	2.22	--
	10/1/2018	21.82	7.66	2,570	1.85	54.5
	3/28/2019	17.60	7.03	5,490	2.26	37.4
	6/27/2019	19.80	7.13	2,920	--	310
	9/25/2019	17.17	6.99	--	--	-96.0
	12/4/2019	18.95	6.91	3,210	1.52	-220
	2/25/2020	19.60	7.35	2,880	2.19	103
	5/12/2020	18.90	7.63	2,800	1.95	-17.2
	8/19/2020	20.20	6.92	2,700	1.69	10.5
	11/16/2020	20.03	7.34	3,070	1.44	44.2
	4/1/2021	19.46	7.48	2,240	1.53	35.7
	6/16/2021	20.07	7.41	1,730	1.68	-6.70
	9/14/2021	20.39	7.51	1,690	1.96	-7.00
	11/29/2021	19.60	7.34	2,820	2.04	-24.1
	3/17/2022	19.28	7.40	2,530	2.50	140
	8/30/2022	19.94	7.31	1,980	2.78	15.1
	3/9/2023	19.88	6.20	2,830	2.97	144
MW-4	1/4/2018	19.75	7.04	3,080	2.15	-277
	4/12/2018	18.37	7.16	3,690	3.78	-220
	4/26/2018	18.20	7.06	4,750	--	--
	7/24/2018	18.60	7.01	3,630	2.55	--
	10/1/2018	22.68	7.42	3,210	1.09	-183
	3/28/2019	7.85	7.00	5,540	2.71	-99.6
	6/27/2019	20.02	7.00	3,380	--	345
	9/25/2019	18.17	6.71	--	--	-122
	12/4/2019	19.81	7.01	3,150	1.45	-262
	2/25/2020	20.00	7.42	2,720	1.64	-48.6
	5/12/2020	18.80	10.7	3,070	1.03	-190
	8/19/2020	20.40	6.89	3,250	1.27	-166
	11/16/2020	20.86	7.18	3,680	1.23	-136
	4/1/2021	19.53	7.30	2,730	0.830	-108
	6/16/2021	20.02	7.17	2,120	0.590	-108
	9/14/2021	20.83	7.29	2,020	0.500	-122
	11/29/2021	20.33	7.22	2,770	1.15	-135
	3/17/2022	18.35	7.53	2,360	1.84	49.8
	8/30/2022	20.19	7.19	1,930	1.50	67.0
	3/9/2023	19.99	6.90	2,383	2.32	-50.7

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Table 3

**Summary of Groundwater Field Parameters**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)
MW-5	1/4/2018	19.45	7.04	2,960	2.06	-275
	4/12/2018	18.31	7.29	3,130	8.93	-161
	4/26/2018	17.99	7.29	4,020	--	--
	7/24/2018	18.31	7.06	2,950	6.17	--
	10/1/2018	21.59	7.39	2,640	1.35	-60.4
	3/28/2019	17.30	6.70	5,730	2.49	-85.5
	6/27/2019	19.40	6.96	3,060	--	379
	9/25/2019	17.51	6.80	--	--	-121
	12/4/2019	19.15	6.96	3,030	1.42	-271
	2/25/2020	19.10	7.25	3,010	1.68	0.500
	5/12/2020	18.30	9.03	2,800	1.09	-116
	8/19/2020	20.10	6.89	2,760	1.31	-65.0
	11/16/2020	20.55	7.24	3,010	1.30	-55.4
	4/1/2021	19.28	7.42	2,470	1.20	-33.7
	6/16/2021	19.45	7.37	1,920	1.47	6.00
	9/14/2021	20.30	7.45	1,830	1.00	-21.9
	11/29/2021	19.99	7.33	3,010	2.11	-42.2
	3/17/2022	19.11	7.40	2,630	1.71	129
	8/30/2022	19.81	7.41	1,910	2.30	182
	3/9/2023	23.42	7.29	--	4.92	78.1
MW-6	3/17/2022	19.01	7.96	2,470	7.17	211
	8/30/2022	19.60	7.35	1,850	2.13	229
	3/9/2023	21.57	7.38		7.57	99

## Notes:

°C - degrees Celsius

µS/cm - microsiemens per centimeter

mg/L - milligrams per liter

-- = not measured

mV - millivolts

DO - dissolved oxygen

ORP - oxidation reduction potential

Table 4

**Summary of Groundwater Analytical Results**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	Chloride	TDS
<b>NMWQCC Groundwater Quality Standards</b>		<b>0.005</b>	<b>1.0</b>	<b>0.7</b>	<b>0.62</b>	<b>250</b>	<b>1,000</b>
MW-1	9/20/2017	0.20	0.077	0.087	0.087	580	2,010
	10/17/2017	0.15	0.050	0.062	0.068	560	1,620
	1/4/2018	0.13	<0.0050	0.056	0.030	620	1,720
	4/26/2018	0.023	<0.0010	0.0069	0.0016	560	--
	7/24/2018	<0.0010	<0.0010	<0.0010	<0.0015	580	1,770
	10/1/2018	<0.0010	<0.0010	<0.0010	<0.0020	630	1,640
	3/28/2019	<0.0010	<0.0010	<0.0010	<0.0015	630	1,730
	6/27/2019	<0.0010	<0.0010	<0.0010	<0.0020	640	1,670
	9/25/2019	<0.0010	<0.0010	<0.0010	<0.0015	590	1,800
	12/13/2019	<0.0010	<0.0010	<0.0010	<0.0015	570	1,700
	2/26/2020	<0.0010	<0.0010	<0.0010	<0.0015	690	1,720
	5/12/2020	<0.0010	<0.0010	<0.0010	<0.0015	690	1,920
	8/19/2020	<0.0010	<0.0010	<0.0010	<0.0015	640	1,970
	11/16/2020	<0.0010	<0.0010	<0.0010	<0.0015	730	1,940
	4/1/2021	<0.0010	<0.0010	<0.0010	<0.0015	690	1,740
	6/16/2021	<0.0010	<0.0010	<0.0010	<0.0015	620	1,840
	9/14/2021	<0.0010	<0.0010	<0.0010	<0.0015	690	1,830
	11/29/2021	<0.0010	<0.0010	<0.0010	<0.0015	750	1,860
	3/17/2022	--	--	--	--	760	1,860
	8/30/2022	--	--	--	--	730	1,960
	3/7/2023	--	--	--	--	690	1,720
MW-2	1/4/2018	<0.0010	<0.0010	<0.0010	<0.0015	710	1,840
	4/26/2018	<0.0010	<0.0010	<0.0010	<0.0015	590	--
	7/24/2018	0.0067	<0.0010	<0.0010	<0.0015	540	1,770
	10/1/2018	<0.0010	<0.0010	<0.0010	<0.0020	630	1,690
	3/28/2019	<0.0010	<0.0010	<0.0010	<0.0020	630	1,730
	6/27/2019	<0.0010	<0.0010	<0.0010	<0.0020	640	1,900
	9/25/2019	<0.0010	<0.0010	<0.0010	<0.0015	640	1,980
	12/4/2019	<0.0010	<0.0010	<0.0010	<0.0015	600	1,760
	2/26/2020	<0.0010	<0.0010	<0.0010	<0.0015	780	1,780
	5/12/2020	<0.0010	<0.0010	<0.0010	<0.0015	770	2,030
	8/19/2020	<0.0010	<0.0010	<0.0010	<0.0015	760	2,220
	11/16/2020	<0.0010	<0.0010	<0.0010	<0.0015	760	2,100
	4/1/2021	<0.0010	<0.0010	<0.0010	<0.0015	750	1,820
	6/16/2021	<0.0010	<0.0010	<0.0010	<0.0015	750	2,020
	9/14/2021	<0.0010	<0.0010	<0.0010	<0.0015	840	2,010
	11/29/2021	<0.0010	<0.0010	<0.0010	<0.0015	810	2,090
	3/17/2022	--	--	--	--	820	2,020
	8/30/2022	--	--	--	--	800	2,070
	3/7/2023	--	--	--	--	810	1,900

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Table 4

**Summary of Groundwater Analytical Results**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	Chloride	TDS
<b>NMWQCC Groundwater Quality Standards</b>		<b>0.005</b>	<b>1.0</b>	<b>0.7</b>	<b>0.62</b>	<b>250</b>	<b>1,000</b>
MW-3	1/4/2018	<0.0010	<0.0010	<0.0010	<0.0015	670	1,930
	4/26/2018	<0.0010	<0.0010	<0.0010	<0.0015	280	--
	7/24/2018	<0.0010	<0.0010	<0.0010	<0.0015	640	1,980
	10/1/2018	<0.0010	<0.0010	<0.0010	<0.0020	740	1,880
	3/28/2019	0.0015	<0.0010	0.0045	<0.0015	580	1,790
	6/27/2019	<0.0010	<0.0010	<0.0010	<0.0020	670	1,810
	9/25/2019	<0.0010	<0.0010	<0.0010	<0.0015	650	2,050
	12/4/2019	<0.0010	<0.0010	<0.0010	<0.0015	630	1,910
	2/26/2020	<0.0010	<0.0010	<0.0010	<0.0015	720	1,800
	5/12/2020	<0.0010	<0.0010	<0.0010	<0.0015	630	1,720
	8/19/2020	<0.0010	<0.0010	<0.0010	<0.0015	590	1,810
	11/16/2020	<0.0010	<0.0010	<0.0010	<0.0015	690	1,930
	4/1/2021	<0.0010	<0.0010	<0.0010	<0.0015	640	1,690
	6/16/2021	<0.0010	<0.0010	<0.0010	<0.0015	620	1,790
	9/14/2021	<0.0010	<0.0010	<0.0010	<0.0015	660	1,770
	11/29/2021	<0.0010	<0.0010	<0.0010	<0.0015	710	1,920
	3/17/2022	--	--	--	--	710	1,700
	8/30/2022	--	--	--	--	650	2,070
	3/7/2023	--	--	--	--	820	1,660
MW-4	1/4/2018	0.32	<0.0010	0.14	0.0089	670	2,010
	4/26/2018	0.17	<0.0010	0.16	<0.0015	600	--
	7/24/2018	0.13	<0.0010	0.13	<0.0015	670	2,430
	10/1/2018	0.040	<0.0010	0.049	<0.0020	750	2,430
	3/28/2019	0.0015	<0.0010	0.0045	<0.0015	580	1,790
	6/27/2019	<0.0010	<0.0010	0.0036	<0.0020	670	2,200
	9/25/2019	<0.0010	<0.0010	0.0016	<0.0015	550	2,000
	12/4/2019	<0.0010	<0.0010	<0.0010	<0.0015	530	2,000
	2/26/2020	<0.0010	<0.0010	<0.0010	<0.0015	580	1,680
	5/12/2020	<0.0010	<0.0010	<0.0010	<0.0015	570	1,780
	8/19/2020	<0.0010	<0.0010	<0.0010	<0.0015	650	2,180
	11/16/2020	<0.0010	<0.0010	<0.0010	<0.0015	730	2,410
	4/1/2021	<0.0010	<0.0010	<0.0010	<0.0015	700	2,060
	6/16/2021	<0.0010	<0.0010	<0.0010	<0.0015	680	2,080
	9/14/2021	<0.0010	<0.0010	<0.0010	<0.0015	670	2,060
	11/29/2021	<0.0010	<0.0010	<0.0010	<0.0015	540	1,690
	3/17/2022	--	--	--	--	580	1,560
	8/30/2022	--	--	--	--	620	1,840
	3/7/2023	--	--	--	--	540	1,490

Table 4

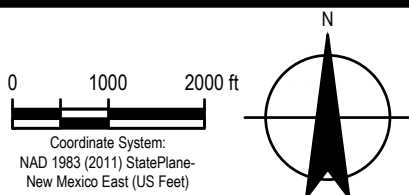
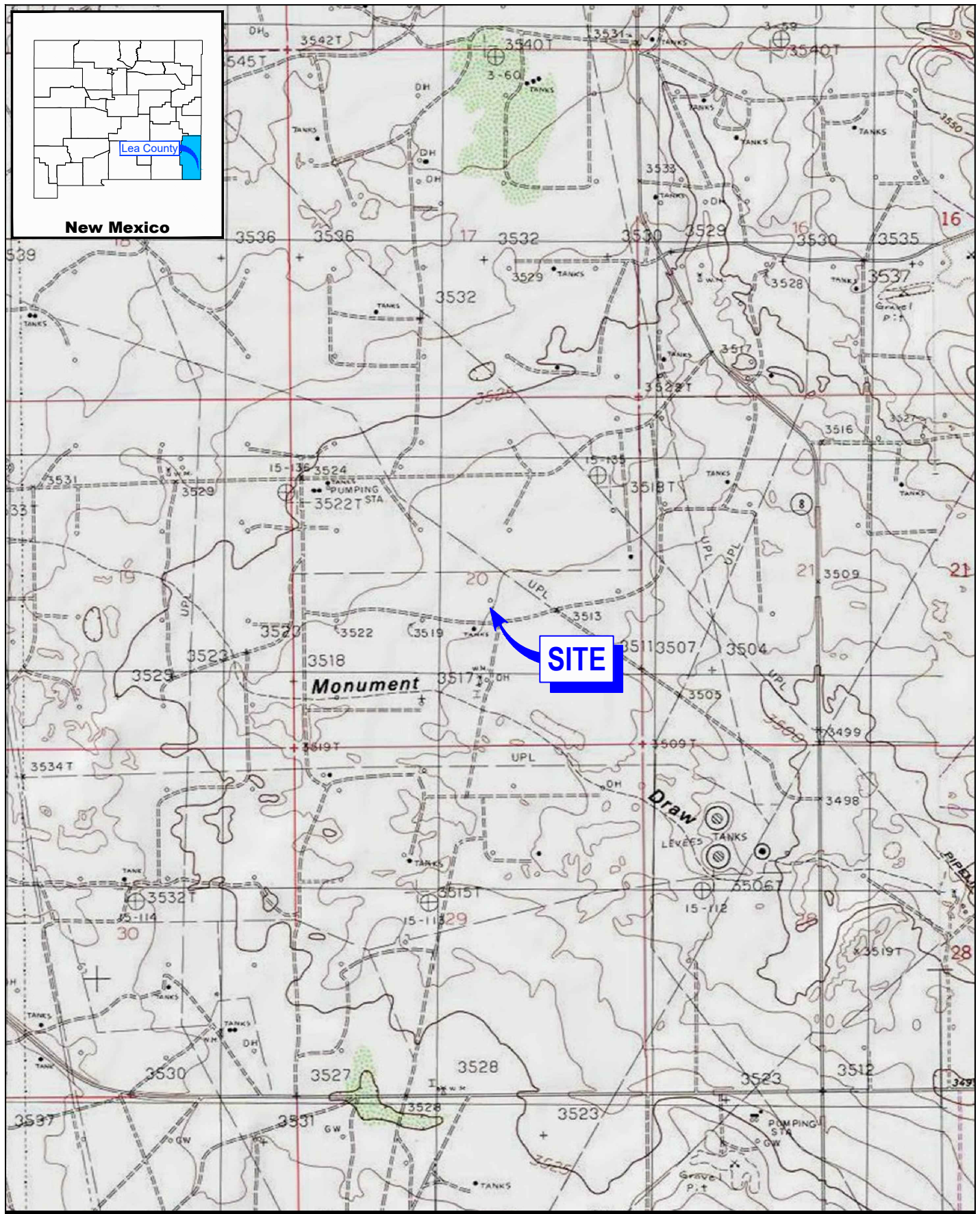
**Summary of Groundwater Analytical Results**  
**O-6-1 4"**  
**Lea County, New Mexico**  
**ETC Texas Pipeline, Ltd.**  
**1RP-4643**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	Chloride	TDS
<b>NMWQCC Groundwater Quality Standards</b>		<b>0.005</b>	<b>1.0</b>	<b>0.7</b>	<b>0.62</b>	<b>250</b>	<b>1,000</b>
MW-5	1/4/2018	<b>0.13</b>	0.015	0.077	0.047	<b>690</b>	<b>1,920</b>
	4/26/2018	<b>0.028</b>	<0.0010	0.026	0.020	<b>590</b>	--
	7/24/2018	<b>0.0060</b>	<0.0010	0.0055	<0.0015	<b>610</b>	<b>2,080</b>
	10/1/2018	0.0012	<0.0010	0.0014	<0.0020	<b>680</b>	<b>1,950</b>
	3/28/2019	0.0015	<0.0010	0.0043	<0.0015	<b>570</b>	<b>1,780</b>
	6/27/2019	<0.0010	<0.0010	<0.0010	<0.0020	<b>640</b>	<b>1,900</b>
	9/25/2019	<0.0010	<0.0010	<0.0010	<0.0015	<b>640</b>	<b>2,030</b>
	12/4/2019	<0.0010	<0.0010	<0.0010	<0.0015	<b>570</b>	<b>1,820</b>
	2/26/2020	<0.0010	<0.0010	<0.0010	<0.0015	<b>740</b>	<b>1,870</b>
	5/12/2020	<0.0010	<0.0010	<0.0010	<0.0015	<b>620</b>	<b>1,800</b>
	8/19/2020	<0.0010	<0.0010	<0.0010	<0.0015	<b>620</b>	<b>1,980</b>
	11/16/2020	<0.0010	<0.0010	<0.0010	<0.0015	<b>700</b>	<b>1,910</b>
	4/1/2021	<0.0010	<0.0010	<0.0010	<0.0015	<b>720</b>	<b>1,840</b>
	6/16/2021	<0.0010	<0.0010	<0.0010	<0.0015	<b>690</b>	<b>1,990</b>
	9/14/2021	<0.0010	<0.0010	<0.0010	<0.0015	<b>710</b>	<b>1,850</b>
	11/29/2021	<0.0010	<0.0010	<0.0010	<0.0015	<b>690</b>	<b>1,810</b>
	3/17/2022	--	--	--	--	<b>710</b>	<b>1,750</b>
	8/30/2022	--	--	--	--	<b>670</b>	<b>1,880</b>
	3/7/2023	--	--	--	--	<b>750</b>	<b>1,830</b>
MW-6	3/17/2022	<0.0010	<0.0010	<0.0010	<0.0015	<b>640</b>	<b>1,580</b>
	8/30/2022	<0.0010	<0.0010	<0.0010	<0.0015	<b>540</b>	<b>1,740</b>
	3/7/2023	<0.0010	<0.0010	<0.0010	<0.0015	<b>650</b>	<b>1,780</b>

## Notes:

- 1) Analytical results are presented in milligrams per liter (mg/L).
- 2) TDS - total dissolved solids
- 3) NMWQCC = New Mexico Water Quality Control Commission
- 4) < - Analyte was not detected at or above the laboratory reporting limit.
- 5) -- = not analyzed
- 6) Shaded/bolded results exceed their respective NMWQCC groundwater quality standard.





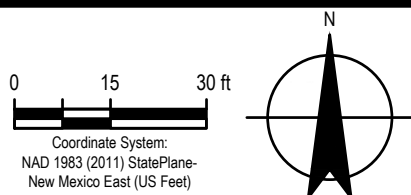
ETC TEXAS PIPELINE, LTD.  
LEA COUNTY, NEW MEXICO  
0-6-14"

Project No. 12603937  
Date August 2023

SITE LOCATION MAP

FIGURE 1





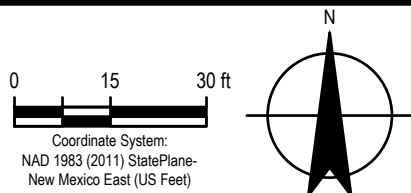
ETC TEXAS PIPELINE, LTD.  
LEA COUNTY, NEW MEXICO  
0-6-1 4"

Project No. 12603937  
Date August 2023

**SITE DETAILS MAP**

**FIGURE 2**



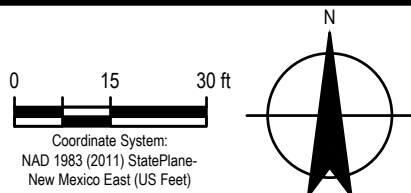


ETC TEXAS PIPELINE, LTD.  
LEA COUNTY, NEW MEXICO  
0-6-1 4"

Project No. 12603937  
Date August 2023

**MARCH 2022 GROUNDWATER  
POTENTIOMETRIC SURFACE MAP**

**FIGURE 3**



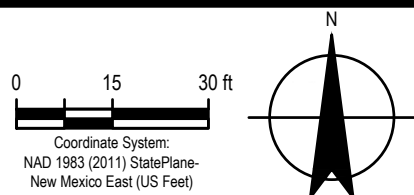
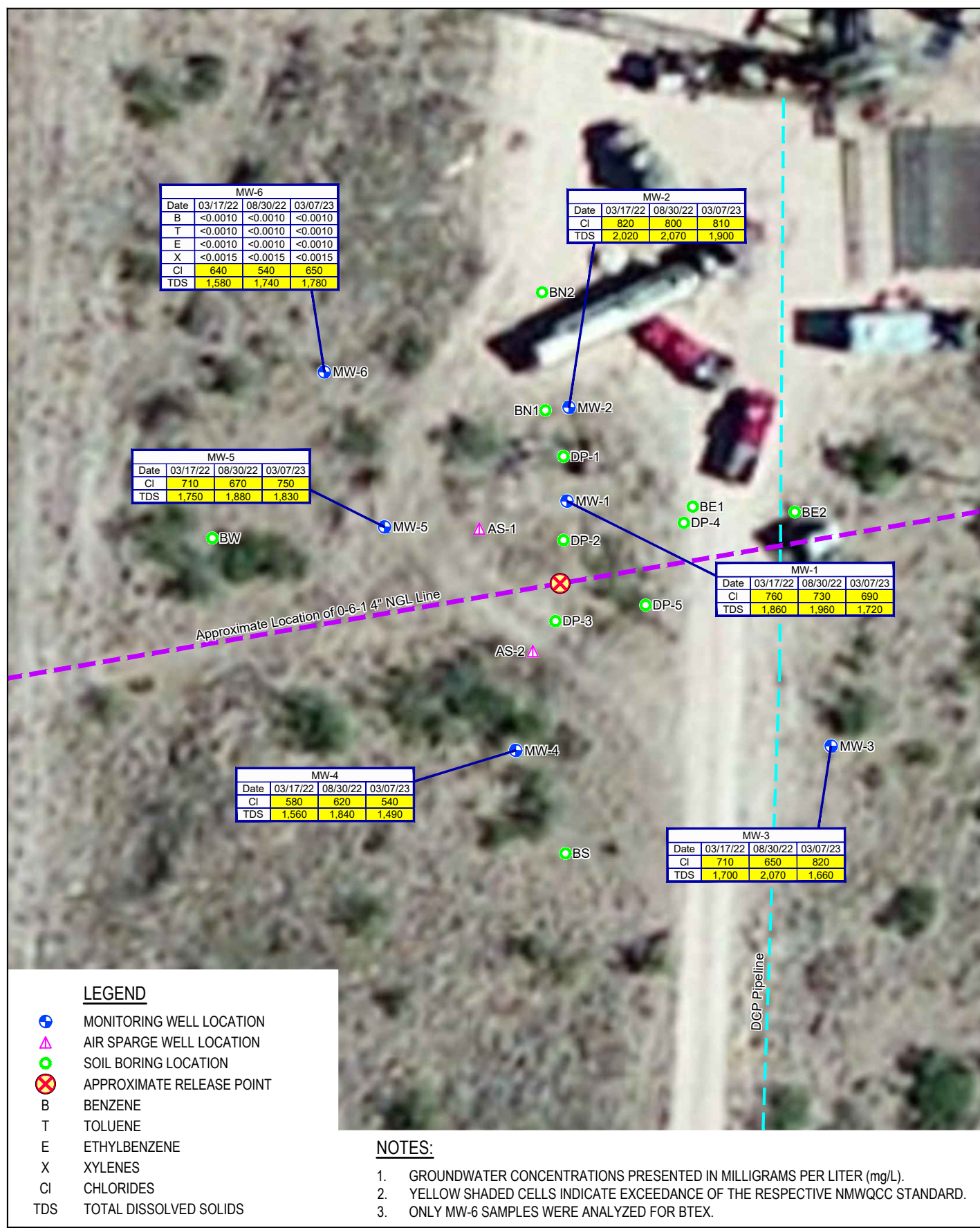
ETC TEXAS PIPELINE, LTD.  
LEA COUNTY, NEW MEXICO  
0-6-1 4"

Project No. 12603937  
Date August 2023

**AUGUST 2022 GROUNDWATER  
POTENTIOMETRIC SURFACE MAP**

**FIGURE 4**





ETC TEXAS PIPELINE, LTD.  
LEA COUNTY, NEW MEXICO  
0-6-1 4"

Project No. 12603937  
Date August 2023

2022 AND MARCH 2023 GROUNDWATER  
COC CONCENTRATIONS MAP

FIGURE 5

# Appendices

# **Appendix A**

## **Boring/Monitoring Well Log**



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 2

PROJECT NAME: O-6-1 4"

HOLE DESIGNATION: MW-6

PROJECT NUMBER: 12603937

DATE COMPLETED: 14 March 2022

CLIENT: ETC Texas Pipeline, Ltd

DRILLING METHOD: Rotary

LOCATION: Lea County, New Mexico

FIELD PERSONNEL: Charles Neligh

DRILLING COMPANY: White Drilling Company, Inc.

DRILLER: Bo Adkin

File: \\GHDNET\GHD\US\ALBUQUERQUE\PROJECTS\66212603937\TECH\GINT LOGS\12603937 ENV\GPJ Library File: GHD\_ENVIRO\_V08.GLB Report: OVERBURDEN LOG Date: 21/7/23

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' Value	PID (ppm)
2	SAND, brown							
4	SAND / SANDSTONE, tan	2.00						
6			Type 2 Portland Cement w/5% Bentonite Grout					3.8
8								
10	SAND, yellowish brown	9.00						
12			6" Borehole					3.6
14			Bentonite Chips					
16								4.4
18								
20								4.0
22								
24								
26			20/40 Sand					5.4
28			Screen					
30								
32	CLAYEY SAND, grayish brown	32.00						4.8
34	END OF BOREHOLE @ 33.00ft BGS	33.00						

## COMPLETION DETAILS

 Screened interval:  
22.00 to 33.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE





# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 2

PROJECT NAME: O-6-1 4"

HOLE DESIGNATION: MW-6

PROJECT NUMBER: 12603937

DATE COMPLETED: 14 March 2022

CLIENT: ETC Texas Pipeline, Ltd

DRILLING METHOD: Rotary

LOCATION: Lea County, New Mexico

FIELD PERSONNEL: Charles Neligh

DRILLING COMPANY: White Drilling Company, Inc.

DRILLER: Bo Adkin

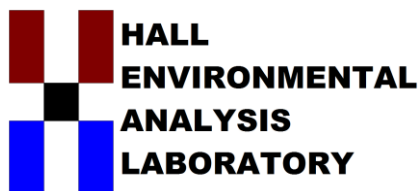
DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' Value	PID (ppm)
36			Length: 11ft Diameter: 2in Slot Size: #10 Material: Sch. 40 PVC Seal: 10.00 to 20.00ft BGS Material: Bentonite Chips Sand Pack: 20.00 to 33.00ft BGS Material: 20/40 Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

**NOTES:** MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

File: \\GHDNET\GHD\US\ALBUQUERQUE\PROJECTS\66212603937\TECH\GINT LOGS\12603937\_ENV\GPJ Library File: GHD\_ENVIRO\_V08.GLB Report: OVERBURDEN LOG Date: 21/7/23

# **Appendix B**

## **Laboratory Analytical Reports**



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

March 21, 2022

Christine Mathews

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX:

RE: 0 6 1

OrderNo.: 2203741

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/15/2022 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](http://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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

Lab Order 2203741

Date Reported: 3/21/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: S-12574712-CN-MW-6-25'

Project: 0 6 1

Collection Date: 3/14/2022 1:00:00 PM

Lab ID: 2203741-001

Matrix: SOIL

Received Date: 3/15/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LRN</b>
Chloride	ND	60		mg/Kg	20	3/17/2022 11:41:27 PM	66250
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/17/2022 6:56:40 PM	66203
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/17/2022 6:56:40 PM	66203
Surr: DNOP	91.3	51.1-141		%Rec	1	3/17/2022 6:56:40 PM	66203
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/16/2022 12:05:49 PM	66178
Surr: BFB	108	70-130		%Rec	1	3/16/2022 12:05:49 PM	66178
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/16/2022 12:05:49 PM	66178
Toluene	ND	0.050		mg/Kg	1	3/16/2022 12:05:49 PM	66178
Ethylbenzene	ND	0.050		mg/Kg	1	3/16/2022 12:05:49 PM	66178
Xylenes, Total	ND	0.099		mg/Kg	1	3/16/2022 12:05:49 PM	66178
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	3/16/2022 12:05:49 PM	66178

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203741  
21-Mar-22

Client: GHD  
Project: 0 6 1

Sample ID: MB-66250	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 66250	RunNo: 86570
Prep Date: 3/17/2022	Analysis Date: 3/17/2022	SeqNo: 3055565 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-66250	SampType: lcs	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 66250	RunNo: 86570
Prep Date: 3/17/2022	Analysis Date: 3/17/2022	SeqNo: 3055566 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 91.5 90 110

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative 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 2 of 5

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203741

21-Mar-22

Client: GHD

Project: 0 6 1

Sample ID: 2203741-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: S-12574712-CN-MW-		Batch ID: 66203		RunNo: 86542						
Prep Date: 3/16/2022		Analysis Date: 3/17/2022		SeqNo: 3055204		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.8	48.92	6.783	88.6	36.1	154			
Surr: DNOP	3.4		4.892		68.8	51.1	141			

Sample ID: 2203741-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: S-12574712-CN-MW-		Batch ID: 66203		RunNo: 86542						
Prep Date: 3/16/2022		Analysis Date: 3/17/2022		SeqNo: 3055205		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.5	47.44	6.783	84.6	36.1	154	6.59	33.9	
Surr: DNOP	3.1		4.744		64.4	51.1	141	0	0	

Sample ID: <b>LCS-66203</b>		SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>66203</b>			RunNo: <b>86542</b>						
Prep Date: <b>3/16/2022</b>		Analysis Date: <b>3/17/2022</b>			SeqNo: <b>3055280</b>		Units: <b>mg/Kg</b>				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		46	10	50.00	0	92.3	68.9	135			
Surr: DNOP		3.7		5.000		73.9	51.1	141			

Sample ID: MB-66203		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS		Batch ID: 66203		RunNo: 86542						
Prep Date: 3/16/2022		Analysis Date: 3/17/2022		SeqNo: 3055284			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.1	51.1	141			

**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 Quantitative 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



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203741

21-Mar-22

Client: GHD

Project: 0 6 1

Sample ID: <b>mb-66178</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053232</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	70	130			

Sample ID: <b>lcs-66178</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053234</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	78.6	131			
Surr: BFB	2200		1000		221	70	130			S

Sample ID: <b>2203741-001ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-12574712-CN-MW-</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053236</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.88	0	111	70	130			
Surr: BFB	2300		995.0		228	70	130			S

Sample ID: <b>2203741-001amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-12574712-CN-MW-</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053237</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.85	0	113	70	130	1.68	20	
Surr: BFB	2300		994.0		227	70	130	0	0	S

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative 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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203741

21-Mar-22

Client: GHD

Project: 0 6 1

Sample ID: <b>mb-66178</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053274</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	70	130			

Sample ID: <b>LCS-66178</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>66178</b>	RunNo: <b>86522</b>								
Prep Date: <b>3/15/2022</b>	Analysis Date: <b>3/16/2022</b>	SeqNo: <b>3053275</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.7	80	120			
Toluene	0.98	0.050	1.000	0	98.5	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

**Qualifiers:**

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



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

## Sample Log-In Check List

Client Name: GHD

Work Order Number: 2203741

RcptNo: 1

Received By: Tracy Casarrubias 3/15/2022 7:30:00 AM

Completed By: Sean Livingston 3/15/2022 8:12:06 AM

Reviewed By: *JS* 3-15-22*Sean Livingston*Chain of Custody

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

Log In

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

# of preserved  
bottles checked  
for pH:

( $\leq 2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: *one 3/15/22*

Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good				

Released to Imaging: 9/20/2023 4:38:41 PM

**Mailing Address:**

Phone #:

email or Fax#: Christine.Matthews@qld.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC      ☐ Other

☐ EDD (Type) \_\_\_\_\_

☒ Standard ☒ Rush *5 Day*

Project Name:

Project #:

Project Manager:

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF):  $0.1 - 0 = 0.1$  ( $^{\circ}\text{C}$ )Container  
Type and #Preservative  
Type

HEAL No.

7703741

001

Date	Time	Matrix	Sample Name
------	------	--------	-------------

3-14-22	1300	S	4-1251412-031422-N-Mid-6-25
---------	------	---	-----------------------------

402

—

Date:	Time:	Relinquished by:
-------	-------	------------------

3-14-22 1500

Date:	Time:	Relinquished by:
-------	-------	------------------

3/14/22 1900

Received by:	Via:
--------------	------

Received by:                      Via: CCM

3/15/22 +130

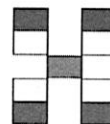
Date	Time
------	------

3/4/92 1500

Date	Time
------	------

3/15/22 +130

Remarks:
----------



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

April 01, 2022

Christine Mathews

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: 0-6-1

OrderNo.: 2203A21

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/18/2022 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



## Analytical Report

Lab Order **2203A21**

Date Reported: 4/1/2022

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** GW-12574712-031722-CN-MW

**Project:** 0-6-1

**Collection Date:** 3/17/2022 12:30:00 PM

**Lab ID:** 2203A21-001

**Matrix:** AQUEOUS

**Received Date:** 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	760	50	*	mg/L	100	3/25/2022 6:18:43 PM	R86775
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1860	40.0	*D	mg/L	1	3/27/2022 6:34:00 PM	66376

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

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

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## Analytical Report

Lab Order **2203A21**

Date Reported: 4/1/2022

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** GW-12574712-031722-CN-MW

**Project:** 0-6-1

**Collection Date:** 3/17/2022 1:00:00 PM

**Lab ID:** 2203A21-002

**Matrix:** AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	820	50	*	mg/L	100	3/25/2022 7:33:11 PM	R86775
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2020	40.0	*D	mg/L	1	3/27/2022 6:34:00 PM	66376

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

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

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## Analytical Report

Lab Order **2203A21**

Date Reported: 4/1/2022

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** GW-12574712-031722-CN-MW

**Project:** 0-6-1

**Collection Date:** 3/17/2022 1:30:00 PM

**Lab ID:** 2203A21-003

**Matrix:** AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	710	50	*	mg/L	100	3/25/2022 7:58:01 PM	R86775
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1700	40.0	*D	mg/L	1	3/27/2022 6:34:00 PM	66376

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

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

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## Analytical Report

Lab Order **2203A21**

Date Reported: 4/1/2022

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** GW-12574712-031722-CN-MW

**Project:** 0-6-1

**Collection Date:** 3/17/2022 2:00:00 PM

**Lab ID:** 2203A21-004

**Matrix:** AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	580	50	*	mg/L	100	3/25/2022 8:22:50 PM	R86775
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1560	40.0	*D	mg/L	1	3/27/2022 6:34:00 PM	66376

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

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

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## Analytical Report

Lab Order **2203A21**

Date Reported: 4/1/2022

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** GW-12574712-031722-CN-MW

**Project:** 0-6-1

**Collection Date:** 3/17/2022 2:30:00 PM

**Lab ID:** 2203A21-005

**Matrix:** AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	710	50	*	mg/L	100	3/25/2022 8:47:39 PM	R86775
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1750	40.0	*D	mg/L	1	3/27/2022 6:34:00 PM	66376

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

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

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## Analytical Report

Lab Order 2203A21

Date Reported: 4/1/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: GW-12574712-031722-CN-MW

Project: 0-6-1

Collection Date: 3/17/2022 3:00:00 PM

Lab ID: 2203A21-006

Matrix: AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	640	50	*	mg/L	100	3/25/2022 9:37:17 PM	R86775
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: KS
Total Dissolved Solids	1580	200	*D	mg/L	1	3/27/2022 6:34:00 PM	66376
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/22/2022 10:56:26 PM	B86657
Benzene	ND	1.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
Toluene	ND	1.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
Ethylbenzene	ND	1.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
Xylenes, Total	ND	2.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/22/2022 10:56:26 PM	B86657
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	3/22/2022 10:56:26 PM	B86657

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

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

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## Analytical Report

Lab Order 2203A21

Date Reported: 4/1/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: GW-12574712-031722-CN-MW

Project: 0-6-1

Collection Date: 3/17/2022

Lab ID: 2203A21-007

Matrix: AQUEOUS

Received Date: 3/18/2022 7:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	670	50	*	mg/L	100	3/25/2022 10:02:06 PM	R86775
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: KS
Total Dissolved Solids	1540	200	*D	mg/L	1	3/24/2022 5:38:00 PM	66350
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	1.0		µg/L	1	3/22/2022 11:19:54 PM	B86657
Toluene	ND	1.0		µg/L	1	3/22/2022 11:19:54 PM	B86657
Ethylbenzene	ND	1.0		µg/L	1	3/22/2022 11:19:54 PM	B86657
Xylenes, Total	ND	2.0		µg/L	1	3/22/2022 11:19:54 PM	B86657
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	3/22/2022 11:19:54 PM	B86657

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

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

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## Date Reported: 4/1/2022

Received Date: 3/18/2022 7:25:00 AM

Analyst: **NSB**



**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A21

01-Apr-22

**Client:** GHD**Project:** 0-6-1

Sample ID: <b>MB</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R86775</b>	RunNo: <b>86775</b>								
Prep Date:	Analysis Date: <b>3/25/2022</b>	SeqNo: <b>3064243</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: <b>LCS</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R86775</b>	RunNo: <b>86775</b>								
Prep Date:	Analysis Date: <b>3/25/2022</b>	SeqNo: <b>3064244</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.0	90	110			

Sample ID: <b>LCS</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R86775</b>	RunNo: <b>86775</b>								
Prep Date:	Analysis Date: <b>3/25/2022</b>	SeqNo: <b>3064251</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.4	90	110			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative 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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A21

01-Apr-22

**Client:** GHD**Project:** 0-6-1

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>B86657</b>	RunNo: <b>86657</b>								
Prep Date:	Analysis Date: <b>3/22/2022</b>	SeqNo: <b>3059391</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		98.1	70	130			

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>B86657</b>	RunNo: <b>86657</b>								
Prep Date:	Analysis Date: <b>3/22/2022</b>	SeqNo: <b>3059392</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	83.7	66.5	126			
Benzene	17	1.0	20.00	0	86.6	80	120			
Toluene	18	1.0	20.00	0	91.4	80	120			
Ethylbenzene	18	1.0	20.00	0	92.1	80	120			
Xylenes, Total	55	2.0	60.00	0	92.1	80	120			
1,2,4-Trimethylbenzene	18	1.0	20.00	0	91.2	80	120			
1,3,5-Trimethylbenzene	18	1.0	20.00	0	89.9	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		99.0	70	130			

**Qualifiers:**

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

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A21

01-Apr-22

Client: GHD

Project: 0-6-1

Sample ID: <b>MB-66350</b>	SampType: <b>MBLK</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>PBW</b>	Batch ID: <b>66350</b>	RunNo: <b>86728</b>								
Prep Date: <b>3/23/2022</b>	Analysis Date: <b>3/24/2022</b>	SeqNo: <b>3062125</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: <b>LCS-66350</b>	SampType: <b>LCS</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>66350</b>	RunNo: <b>86728</b>								
Prep Date: <b>3/23/2022</b>	Analysis Date: <b>3/24/2022</b>	SeqNo: <b>3062126</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Sample ID: <b>MB-66376</b>	SampType: <b>MBLK</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>PBW</b>	Batch ID: <b>66376</b>	RunNo: <b>86764</b>								
Prep Date: <b>3/24/2022</b>	Analysis Date: <b>3/27/2022</b>	SeqNo: <b>3063824</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: <b>LCS-66376</b>	SampType: <b>LCS</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>66376</b>	RunNo: <b>86764</b>								
Prep Date: <b>3/24/2022</b>	Analysis Date: <b>3/27/2022</b>	SeqNo: <b>3063825</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

**Qualifiers:**

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



## Sample Log-In Check List

Client Name: GHD

Work Order Number: 2203A21

RcptNo: 1

Received By: Cheyenne Cason

3/18/2022 7:25:00 AM

*Chul*

Completed By: Cheyenne Cason

3/18/2022 10:19:17 AM

*Chul*Reviewed By: *A 3-21-22*Chain of Custody

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

Log In

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

# of preserved  
bottles checked  
for pH:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by: *JN 3/21/22*Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Not Present			

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

September 08, 2022

Christine Mathews

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX:

RE: 0-6-1

OrderNo.: 2208I09

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/31/2022 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



## Analytical Report

Lab Order 2208I09

Date Reported: **9/8/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** MW-1

**Project:** 0-6-1

**Collection Date:** 8/30/2022 1:15:00 PM

**Lab ID:** 2208I09-001

**Matrix:** AQUEOUS

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JTT
Chloride	730	50	*	mg/L	100	8/31/2022 4:33:27 PM	R90724
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	1960	20.0	*	mg/L	1	9/6/2022 8:40:00 AM	69912

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

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

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## Analytical Report

Lab Order 2208I09

Date Reported: 9/8/2022

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: MW-4

Project: 0-6-1

Collection Date: 8/30/2022 3:30:00 PM

Lab ID: 2208I09-004

Matrix: AQUEOUS

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JTT
Chloride	620	50	*	mg/L	100	8/31/2022 5:47:31 PM	R90724
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: SNS
Total Dissolved Solids	1840	40.0	*D	mg/L	1	9/6/2022 8:40:00 AM	69912

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

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

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## Analytical Report

Lab Order 2208I09

Date Reported: **9/8/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** MW-6

**Project:** 0-6-1

**Collection Date:** 8/30/2022 2:15:00 PM

**Lab ID:** 2208I09-006

**Matrix:** AQUEOUS

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JTT
Chloride	540	50	*	mg/L	100	8/31/2022 7:01:38 PM	R90724
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	1740	100	*D	mg/L	1	9/6/2022 8:40:00 AM	69912

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

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208I09

08-Sep-22

Client: GHD  
Project: 0-6-1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBW	Batch ID: R90724	RunNo: 90724
Prep Date:	Analysis Date: 8/31/2022	SeqNo: 3242791 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	0.50

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSW	Batch ID: R90724	RunNo: 90724
Prep Date:	Analysis Date: 8/31/2022	SeqNo: 3242792 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	4.7	0.50 5.000 0 93.0 90 110

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative 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#: 2208I0908-Sep-22

Client: GHD  
Project: 0-6-1

Sample ID: MB-69912	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 69912	RunNo: 90796								
Prep Date: 9/1/2022	Analysis Date: 9/6/2022	SeqNo: 3245583		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-69912	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 69912	RunNo: 90796								
Prep Date: 9/1/2022	Analysis Date: 9/6/2022	SeqNo: 3245584		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	100	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative 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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4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: GHD

Work Order Number: 2208109

RcptNo: 1

Received By: Juan Rojas

8/31/2022 7:40:00 AM

*Juan Rojas*

Completed By: Tracy Casarrubias

8/31/2022 9:12:17 AM

Reviewed By:

*Jn 8/31/22***Chain of Custody**

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

**Log In**

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: *KPa 8-31-22*

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

**17. Cooler Information**

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			

Released to Imaging: 9/20/2023 4:38:41 PM

EHD

Phone #:

email or Fax#: Christine Matthews @ chd.com

☐ Standard ☐ Level 4 (Full Validation)

☐ NELAC      ☐ Other

☐ EDD (Type)☒ Standard      ☐ Rush

0-6-1

12574712

Christine Mathur

*BN*

On Ice: ☒ Yes ☐ No

# of Coolers:

Cooler Temp (including CF):  $1.5 - 0 = 1.5$  (°C)

Container Type and #	Container Name	Container ID	Container Image	Container Status	Container IP	Container Port	Container Description
Container Type and #	Container Name	Container ID	Container Image	Container Status	Container IP	Container Port	Container Description

Preservative  
Type

HEAL No.

2208109

Date	Time	Matrix	Sample Name
------	------	--------	-------------

8-30-22	1315	W	MW-1
↓	1345		MW-2
	1550		MW-3
	1530		MW-4
↓	<del>1515</del> 1450	↓	MW-5
↓	1415	↓	MW-6

Received by:

Via:

Date \_\_\_\_\_

Time

Date:

Time:

Relinquished by:

Received by:

Via:

Date \_\_\_\_\_

Time

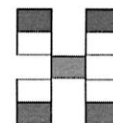
Date:

Time:

Relinquished by:

Remarks:
----------

21 October 8/31/22 7:40



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

Received by OCD: 8/14/2023 8:58:23 AM

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

March 23, 2023

Blair Owen

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX:

RE: 0 6 1

OrderNo.: 2303428

Dear Blair Owen:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/8/2023 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

CLIENT: GHD Client Sample ID: MW-3  
Project: 0 6 1 Collection Date: 3/7/2023 10:40:00 AM  
Lab ID: 2303428-001 Matrix: GROUNDWA Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Chloride	820	50	*	mg/L	100	3/8/2023 11:39:30 PM	A95133
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: DML
Total Dissolved Solids	1660	250	*D	mg/L	1	3/15/2023 12:09:00 PM	73673

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		



## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: MW-4

Project: 0 6 1

Collection Date: 3/7/2023 10:50:00 AM

Lab ID: 2303428-002

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	540	50	*	mg/L	100	3/9/2023 12:04:12 AM	A95133
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: <b>DML</b>
Total Dissolved Solids	1490	100	*D	mg/L	1	3/15/2023 12:09:00 PM	73673

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: MW-1

Project: 0 6 1

Collection Date: 3/7/2023 11:30:00 AM

Lab ID: 2303428-003

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	690	50	*	mg/L	100	3/9/2023 12:28:53 AM	A95133
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: <b>DML</b>
Total Dissolved Solids	1720	100	*D	mg/L	1	3/15/2023 12:09:00 PM	73673

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order **2303428**

Date Reported: 3/23/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** MW-2

**Project:** 0 6 1

**Collection Date:** 3/7/2023 11:50:00 AM

**Lab ID:** 2303428-004

**Matrix:** GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Chloride	810	50	*	mg/L	100	3/9/2023 12:53:33 AM	A95133
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: DML
Total Dissolved Solids	1900	100	*D	mg/L	1	3/15/2023 12:09:00 PM	73673

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

CLIENT: GHD Client Sample ID: MW-5  
Project: 0 6 1 Collection Date: 3/7/2023 12:11:00 PM  
Lab ID: 2303428-005 Matrix: GROUNDWA Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Chloride	750	50	*	mg/L	100	3/9/2023 1:42:55 AM	A95133
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: DML
Total Dissolved Solids	1830	100	*D	mg/L	1	3/15/2023 12:09:00 PM	73673

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: MW-6

Project: 0 6 1

Collection Date: 3/7/2023 12:50:00 PM

Lab ID: 2303428-006

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>NAI</b>
Chloride	650	50	*	mg/L	100	3/9/2023 2:07:36 AM	A95133
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: <b>DML</b>
Total Dissolved Solids	1780	100	*D	mg/L	1	3/15/2023 12:09:00 PM	73673
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Toluene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Ethylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Naphthalene	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1-Methylnaphthalene	ND	5.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
2-Methylnaphthalene	ND	5.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Acetone	ND	10		µg/L	1	3/15/2023 6:11:00 PM	R95285
Bromobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Bromodichloromethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Bromoform	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Bromomethane	ND	3.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
2-Butanone	ND	10		µg/L	1	3/15/2023 6:11:00 PM	R95285
Carbon disulfide	ND	10		µg/L	1	3/15/2023 6:11:00 PM	R95285
Carbon Tetrachloride	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Chlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Chloroethane	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Chloroform	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Chloromethane	ND	3.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
2-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
4-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
cis-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Dibromochloromethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Dibromomethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: MW-6

Project: 0 6 1

Collection Date: 3/7/2023 12:50:00 PM

Lab ID: 2303428-006

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: CCM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1-Dichloroethene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,3-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
2,2-Dichloropropane	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Hexachlorobutadiene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
2-Hexanone	ND	10		µg/L	1	3/15/2023 6:11:00 PM	R95285
Isopropylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
4-Isopropyltoluene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
4-Methyl-2-pentanone	ND	10		µg/L	1	3/15/2023 6:11:00 PM	R95285
Methylene Chloride	ND	3.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
n-Butylbenzene	ND	3.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
n-Propylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
sec-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Styrene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
tert-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
trans-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Trichlorofluoromethane	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Vinyl chloride	ND	1.0		µg/L	1	3/15/2023 6:11:00 PM	R95285
Xylenes, Total	ND	1.5		µg/L	1	3/15/2023 6:11:00 PM	R95285
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%Rec	1	3/15/2023 6:11:00 PM	R95285
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	3/15/2023 6:11:00 PM	R95285
Surr: Dibromofluoromethane	93.2	70-130		%Rec	1	3/15/2023 6:11:00 PM	R95285
Surr: Toluene-d8	98.3	70-130		%Rec	1	3/15/2023 6:11:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: DUP01

Project: 0 6 1

Collection Date: 3/7/2023

Lab ID: 2303428-007

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: CCM
Benzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Toluene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Ethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Naphthalene	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1-Methylnaphthalene	ND	4.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
2-Methylnaphthalene	ND	4.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Acetone	ND	10		µg/L	1	3/15/2023 7:21:00 PM	R95285
Bromobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Bromodichloromethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Bromoform	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Bromomethane	ND	3.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
2-Butanone	ND	10		µg/L	1	3/15/2023 7:21:00 PM	R95285
Carbon disulfide	ND	10		µg/L	1	3/15/2023 7:21:00 PM	R95285
Carbon Tetrachloride	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Chlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Chloroethane	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Chloroform	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Chloromethane	ND	3.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
2-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
4-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
cis-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Dibromochloromethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Dibromomethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1-Dichloroethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1-Dichloroethene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,3-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
2,2-Dichloropropane	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: DUP01

Project: 0 6 1

Collection Date: 3/7/2023

Lab ID: 2303428-007

Matrix: GROUNDWA

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Hexachlorobutadiene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
2-Hexanone	ND	10		µg/L	1	3/15/2023 7:21:00 PM	R95285
Isopropylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
4-Isopropyltoluene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
4-Methyl-2-pentanone	ND	10		µg/L	1	3/15/2023 7:21:00 PM	R95285
Methylene Chloride	ND	3.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
n-Butylbenzene	ND	3.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
n-Propylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
sec-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Styrene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
tert-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
trans-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Trichlorofluoromethane	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Vinyl chloride	ND	1.0		µg/L	1	3/15/2023 7:21:00 PM	R95285
Xylenes, Total	ND	1.5		µg/L	1	3/15/2023 7:21:00 PM	R95285
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	3/15/2023 7:21:00 PM	R95285
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	3/15/2023 7:21:00 PM	R95285
Surr: Dibromofluoromethane	91.5	70-130		%Rec	1	3/15/2023 7:21:00 PM	R95285
Surr: Toluene-d8	99.7	70-130		%Rec	1	3/15/2023 7:21:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: Trip Blank

Project: 0 6 1

Collection Date:

Lab ID: 2303428-008

Matrix: TRIP BLANK

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: CCM
Benzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Toluene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Ethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Naphthalene	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1-Methylnaphthalene	ND	4.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
2-Methylnaphthalene	ND	4.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Acetone	ND	10		µg/L	1	3/15/2023 7:45:00 PM	R95285
Bromobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Bromodichloromethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Bromoform	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Bromomethane	ND	3.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
2-Butanone	ND	10		µg/L	1	3/15/2023 7:45:00 PM	R95285
Carbon disulfide	ND	10		µg/L	1	3/15/2023 7:45:00 PM	R95285
Carbon Tetrachloride	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Chlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Chloroethane	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Chloroform	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Chloromethane	ND	3.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
2-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
4-Chlorotoluene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
cis-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Dibromochloromethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Dibromomethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1-Dichloroethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1-Dichloroethene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,3-Dichloropropane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
2,2-Dichloropropane	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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## Analytical Report

Lab Order 2303428

Date Reported: 3/23/2023

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: Trip Blank

Project: 0 6 1

Collection Date:

Lab ID: 2303428-008

Matrix: TRIP BLANK

Received Date: 3/8/2023 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Hexachlorobutadiene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
2-Hexanone	ND	10		µg/L	1	3/15/2023 7:45:00 PM	R95285
Isopropylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
4-Isopropyltoluene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
4-Methyl-2-pentanone	ND	10		µg/L	1	3/15/2023 7:45:00 PM	R95285
Methylene Chloride	ND	3.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
n-Butylbenzene	ND	3.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
n-Propylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
sec-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Styrene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
tert-Butylbenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
trans-1,2-DCE	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Trichlorofluoromethane	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Vinyl chloride	ND	1.0		µg/L	1	3/15/2023 7:45:00 PM	R95285
Xylenes, Total	ND	1.5		µg/L	1	3/15/2023 7:45:00 PM	R95285
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%Rec	1	3/15/2023 7:45:00 PM	R95285
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	3/15/2023 7:45:00 PM	R95285
Surr: Dibromofluoromethane	92.7	70-130		%Rec	1	3/15/2023 7:45:00 PM	R95285
Surr: Toluene-d8	99.7	70-130		%Rec	1	3/15/2023 7:45:00 PM	R95285

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 2303428  
23-Mar-23

Client: GHD  
Project: 0 6 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A95133	RunNo: 95133								
Prep Date:	Analysis Date: 3/8/2023	SeqNo: 3440358 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: A95133	RunNo: 95133								
Prep Date:	Analysis Date: 3/8/2023	SeqNo: 3440359 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2303428

23-Mar-23

**Client:** GHD**Project:** 0 6 1

Sample ID: <b>100ng lcs</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446377</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.6	70	130			
Toluene	19	1.0	20.00	0	97.0	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.7	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.8	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446378</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/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#: 2303428

23-Mar-23

Client: GHD

Project: 0 6 1

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446378</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/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#: 2303428

23-Mar-23

Client: GHD

Project: 0 6 1

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446378</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.5	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.8	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID: <b>2303428-006ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>MW-6</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446881</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.3	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.5	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: <b>2303428-006amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>						
Client ID: <b>MW-6</b>	Batch ID: <b>R95285</b>			RunNo: <b>95285</b>						
Prep Date:	Analysis Date: <b>3/15/2023</b>			SeqNo: <b>3446882</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	87.4	70	130	2.06	20	
Toluene	20	1.0	20.00	0	99.5	70	130	1.94	20	
Chlorobenzene	21	1.0	20.00	0	103	70	130	0.933	20	
1,1-Dichloroethene	17	1.0	20.00	0	86.8	70	130	2.77	20	
Trichloroethene (TCE)	17	1.0	20.00	0	87.4	70	130	3.31	20	
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130	0	0	
Surr: Dibromofluoromethane	9.1		10.00		91.4	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 Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2303428

23-Mar-23

Client: GHD  
Project: 0 6 1

Sample ID: MB-73673	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 73673	RunNo: 95277								
Prep Date: 3/13/2023	Analysis Date: 3/15/2023	SeqNo: 3446035	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: LCS-73673	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 73673	RunNo: 95277								
Prep Date: 3/13/2023	Analysis Date: 3/15/2023	SeqNo: 3446036	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	989	50.0	1000	0	98.9	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: GHD

Work Order Number: 2303428

RcptNo: 1

Received By: Juan Rojas

3/8/2023 10:20:00 AM

Completed By: Sean Livingston

3/8/2023 11:15:11 AM

Reviewed By: TME

3/8/23

*[Signature]*

*[Signature]*

## Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Client

## Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☒ No ☐ NA ☐

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: *ym 3/8/23*

## Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

## 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Not Present	Morty		

## Chain-of-Custody Record

Client: 64D

Mailing Address: 6121 Linden School Rd

ABQ, NM, 8/7/10

Phone #: 805-934-0902

email or Fax#: Simon.Kordic@ghd.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC      ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: 0-6-1

Project #: 126 03437

Project Manager: Blair Owen

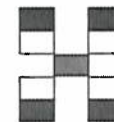
Sampler: *910*

On Ice: ☒ Yes ☐ No

# of Coolers:

Cooler Temp (including CF):  $10.7 - 0.1 = 10.2 (^{\circ}\text{C})$ Container  
Type and #Preservative  
Type

HEAL No.  
303428



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]



ghd.com

➔ The Power of Commitment

**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 251619

CONDITIONS

Operator: REGENCY FIELD SERVICES LLC 8111 Westchester Drive Dallas, TX 75225	OGRID:
	298751
	Action Number:
	251619
Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)	

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2022 Annual Groundwater Monitoring Report for O-6-1 4": Content is Unsatisfactory 1. ETC Texas Pipeline must request soil closure per 19.15.29 of NMAC under the C-141 and provide a closure report for only the soil portion of this incident. 2. If ETC also wishes to request closure for the groundwater incident, it must submit a separate closure report under GWA as part per 19.15.30.19 Subsection (A) and (B), separate from soil, in e-permitting. Director Approval of the NMOCD will be required after submittal of the groundwater incident. 3. Please continue monitoring groundwater and submit report for 2023 no later than April 1, 2024.	9/20/2023