REVIEWED
By Mike Buchanan at 11:34 am, Jun 04, 2024

2021 Annual Groundwater Monitoring Report

Jal Number 4 Former Tank Battery
Lea County, New Mexico
1RP-1457

ETC Texas Pipeline, Ltd

June 10, 2022

Review of the 2021 Annual Groundwater Monitoring Report: Content Satisfactory
1. Continue quarterly site visits as planned & scheduled
2. Absorbent socks are not considered a remediation method for removing LNAPL, unless it is present at trace/residual levels. Please propose other options for removal of LNAPL in MW-1 in the 2024 annual report.
3. Continue to conduct sampling on a semi-annual basis.
4. Submit the 2022 and 2023 annual reports unless they have already been submitted to OCD in the online portal.
5. Submit the 2024 Annual Report by April 1, 2025.

→ The Power of Commitment

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1. Introduction

This report presents the results of semiannual groundwater monitoring and mobile dual phase extraction (MDPE) events performed during 2021 at the ETC Texas Pipeline, Ltd. (ETC), Jal No. 4 former tank battery (Site). The Site is located on Deep Wells Road about 1/2 mile west of Highway 18 and approximately 10 miles north of Jal in Section 31, Township 23 South, Range 37 East, Lea County, New Mexico (**Figure 1**). Site details can be seen on **Figure 2**. The property is owned by Mr. Kelly Myers and the Site is regulated by the New Mexico Oil Conservation Division (NMOCD). The Site was assigned remediation permit number 1RP-1457 by the NMOCD.

2. Background

The Site is a former tank battery that stored natural gas condensate (condensate) and produced water. A condensate release from a 410-barrel (bbl) tank was discovered in April 2007. Approximately 140 bbls of condensate and 140 bbls of produced water were estimated to have been released in an area of approximately 2,772 square feet.

Approximately 7,500 cubic yards of soil were excavated from the release area during November 2012 and January 2013. A liner was placed in the bottom of the excavation, at approximately 15 feet (ft) below ground surface (bgs), to minimize further vertical migration of the constituents left in place. Excavated soil with concentrations greater than 5,000 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) was disposed of at the Southern Union Gas landfarm. Soil with TPH concentrations meeting NMOCD recommended guidelines was mixed with clean native soil and used as backfill upon NMOCD approval.

Six monitoring wells (MW) and one recovery well (RW) were installed around the release area following backfill of the excavation. Recovery well RW-1 was installed presumably to recover light non-aqueous phase liquid (LNAPL), although only a sheen has ever been noted in the recovery well. Well MW-1, however, has consistently had measurable LNAPL since installation.

CK Associates, LLC (CK) performed groundwater monitoring at the Site during March and June 2015. Additionally, CK conducted a bail down test and paraffin, isoparaffin, aromatics, naphthalene and olefins (PIANO) analysis on LNAPL collected from MW-1 during March 2015.

GHD assumed consulting responsibilities for the Site in August 2015 and performed a groundwater monitoring event in October 2015. A solar controlled, compressed air powered, QED in-well skimmer pump was installed to recover LNAPL from MW-1 by GHD in November 2015. This skimmer operated at the Site in MW-1 until 2018. The skimmer was removed due to low recovery and frequent maintenance due to Site conditions.

The Site has been on a semiannual groundwater monitoring schedule since 2016 and continued through 2021. Additionally mobile dual phase extraction events were performed in 2018, 2019, and 2020 recovering a total of 332 gallons of LNAPL. A summary of LNAPL recovery at the Site is presented in **Table 1**.

Details of 2021 field activities are discussed further in this report.

3. Groundwater Monitoring Summary, Methodology, and Analytical Results

3.1 Groundwater Monitoring Summary

Groundwater elevation measurements were recorded from Site monitoring wells by GHD on May 4, 2021 and October 6, 2021. An oil/water interface probe was used to measure depth to groundwater and check for the presence of LNAPL, if any. Before and after each use, the oil/water interface probe was cleaned with an Alconox®/deionized water solution and rinsed with deionized water. A summary of calculated groundwater elevations for the Site are presented in **Table 2**.

The groundwater flow direction in 2021 was east-southeast and is consistent with historical groundwater flow data. The groundwater gradient was calculated as 0.0018 ft/ft. for May and 0.0017 ft/ft in October 2021. Groundwater potentiometric surface maps for May and October 2021 monitoring events are presented as **Figure 3** and **Figure 4**, respectively.

3.2 Groundwater Monitoring Methodology

Each well was purged of at least three casing volumes of water using a dedicated, polyethylene bailer prior to sampling. Groundwater quality parameters including pH, temperature, oxidation reduction potential, and conductivity were collected using a multi-parameter groundwater quality meter and recorded. A summary of groundwater field parameters is included as **Table 3**.

Groundwater samples were placed in laboratory prepared bottles, packed on ice, and delivered to Hall Environmental Analysis Laboratory located in Albuquerque, New Mexico under chain-of-custody. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260, chloride by EPA Method 300.0, and total dissolved solids (TDS) by Standard Method 2540.

3.3 Groundwater Monitoring Analytical Results

The laboratory analytical results indicate that groundwater samples collected from MW-2 through MW-6 were below laboratory detection limits for BTEX and below New Mexico Water Quality Control Commission (NMWQCC) standards for total dissolved solids and chloride. Historical data indicates that these wells have never been over the NMWQCC standard for any of the analyzed constituents since the initiation of sampling in 2014, except for a detection of benzene in MW-4 in December 2014.

Groundwater in RW-1 was found to contain benzene at concentrations above the NMWQCC standard during both 2021 monitoring events with concentrations of 0.86 mg/L in May and 1.3 mg/L in October 2021. The chloride concentration and TDS concentration in RW-1 were above the NMWQCC standards with concentrations of 310 mg/L in May and 1,150 mg/L during the May 2021 event. Both chloride and TDS concentrations in RW-1 were below NMWQCC standards in October 2021.

LNAPL was measured in MW-1 during both groundwater monitoring events and therefore the well was not sampled.

A summary of the groundwater laboratory analytical results is presented in **Table 4** and shown on **Figure 5**. The corresponding laboratory analytical reports are included in **Appendix A**.

4. LNAPL Presence and Recovery

In May 2021 0.99 feet of LNAPL was measured and in October 2021 2.01 feet of LNAPL was measured. Chart 1 shows a comparison of LNAPL thickness vs. groundwater elevation over time. In general, the trend indicates that LNAPL thickness increases as groundwater table elevation decreases with the exception of conditions as shown for 2016 when groundwater was at the highest measured elevation. In 2016 the LNAPL vs. groundwater elevation trend suggests that conditions went confined temporarily, which is shown by the switch to a direct relationship between LNAPL thickness and water table elevation. This type of scenario could be possible if there is a confining layer (a less permeable soil type or even a less permeable soil of the same type) between 3201-3202 ft amsl. The boring log for MW-1 shows silty sand from 70 feet bgs to total depth of the well at 115 feet; however, the well was installed using air rotary technology and details associated with possible lenses of less permeable soils may have been difficult to log more accurately.

On March 31, 2021 two New Pig™ monitoring well skimming socks were placed in MW-1. The socks were replaced on April 20, May 4, June 15, September 15, and October 6, 2021. The used socks were stored in a sealed and labeled 55-gallon drum on a spill containment pallet on Site. The socks recovered 1.17 gallons of LNAPL and bailing recovered approximately 1 gallon of LNAPL for a combined total of 2.17 gallons recovered in 2021.Site LNAPL recovery is summarized in **Table 1**.

5. Conclusions and 2022 Recommendations

5.1 Conclusions

Based on the above-referenced information, GHD makes the following conclusions:

- Groundwater collected from five Site wells, MW-2 through MW-6, have consistently been below laboratory detection limits or below NMWQCC standards for constituents of concern since sampling began.
- Groundwater samples collected from RW-1 continued to show concentrations of benzene and chloride in excess of the NMWQCC standard during 2021 monitoring events.
- Groundwater monitoring and remediation activities performed since 2014 demonstrate that LNAP and the dissolved phase hydrocarbon plume are stable and in equilibrium with groundwater conditions at the Site.
- The installation of New Pig™ monitoring well skimming socks combined with bailing removed 2.17 gallons of LNAPL from MW-1.

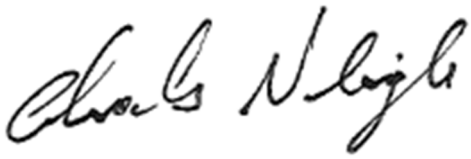
5.2 2022 Recommendations

GHD recommends the following based on 2021 monitoring results:

- Continue groundwater monitoring on a semiannual basis.
- At minimum, quarterly site visits will be performed to gauge and record depth to water and LNAPL thickness in MW-1. The measured LNAPL will be bailed and removed from the well and hydrocarbon absorbent socks placed in the well until the next site visit. Extracted LNAPL and used hydrocarbon absorbents removed from MW-1 will be stored in a labeled drum at the Site pending offsite disposal.

All of Which is Respectfully Submitted,

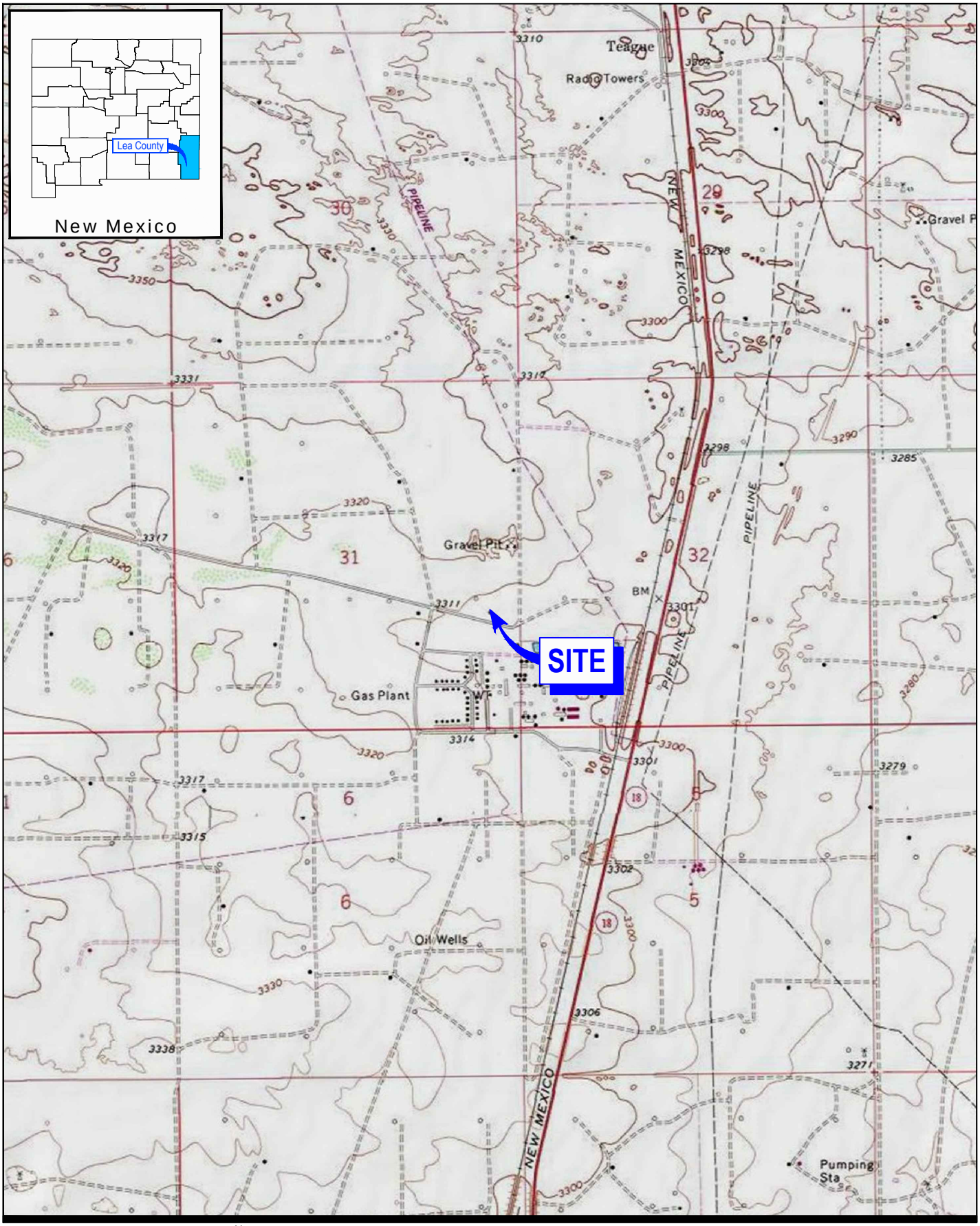
GHD



Charles Neligh
Project Scientist

Christine Mathews
Project Manager

Figures



N

0 1000 2000 ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

GHD

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
JAL 4 FORMER TANK BATTERY

Project No. **11209236**
Date **March 2022**

SITE LOCATION MAP

FIGURE 1

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Data Source: USGS 7.5 Minute quad "Rattlesnake Canyon and JAL NW, New Mexico"
Lat/Long: 32.258541° North, 103.195023° West

0 50 100 ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

N

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ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
JAL 4 FORMER TANK BATTERY

Project No. **11209236**
Date **March 2022**

SITE PLAN

FIGURE 2

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\11209236\Digital_Design\ACAD 2017\Figures\RPT007\11209236-GHD-0000-RPT-EN-0101_DL-007.dwg
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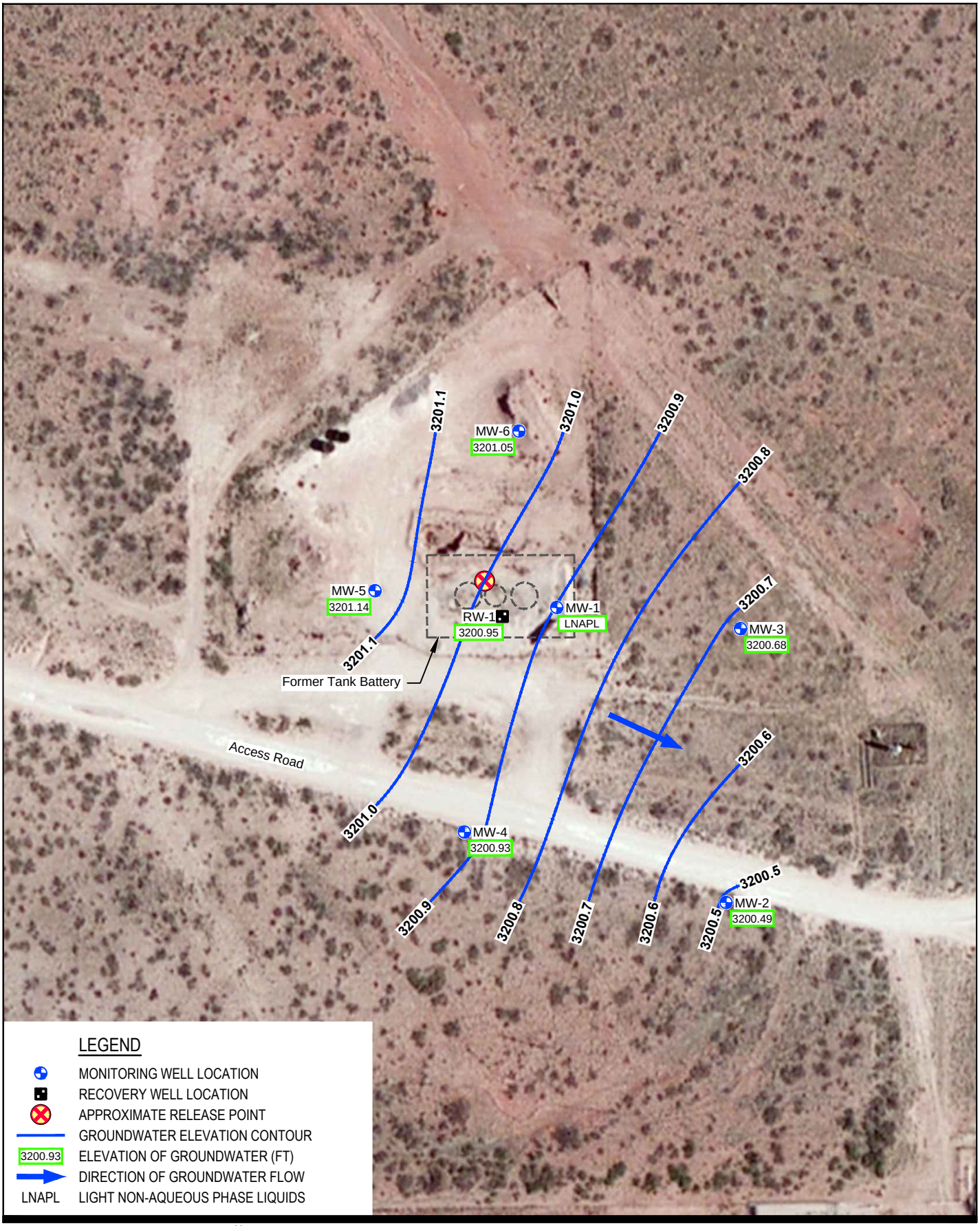

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NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

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Date **March 2022**

GROUNDWATER POTENTIOMETRIC SURFACE MAP - MAY 2021

FIGURE 3

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\11209236\Digital_Design\ACAD 2017\Figures\RPT007\11209236-GHD-0000-RPT-EN-0101_DL-007.dwg
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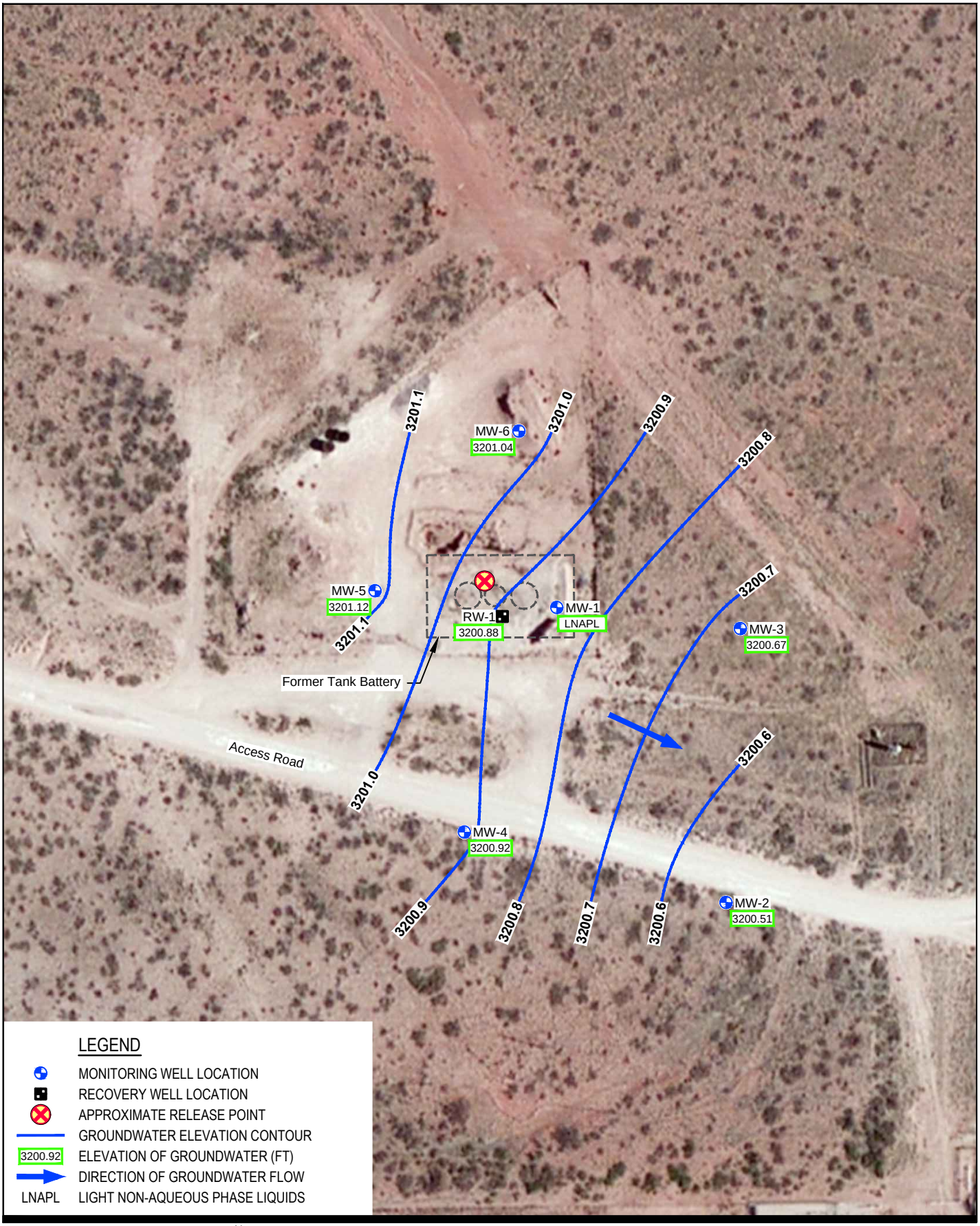

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
JAL 4 FORMER TANK BATTERY

Project No. **11209236**
Date **March 2022**

GROUNDWATER POTENTIOMETRIC SURFACE MAP - OCTOBER 2021

FIGURE 4

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\11209236\Digital_Design\ACAD 2017\Figures\RPT007\11209236-GHD-0000-RPT-EN-0101_DL-007.dwg
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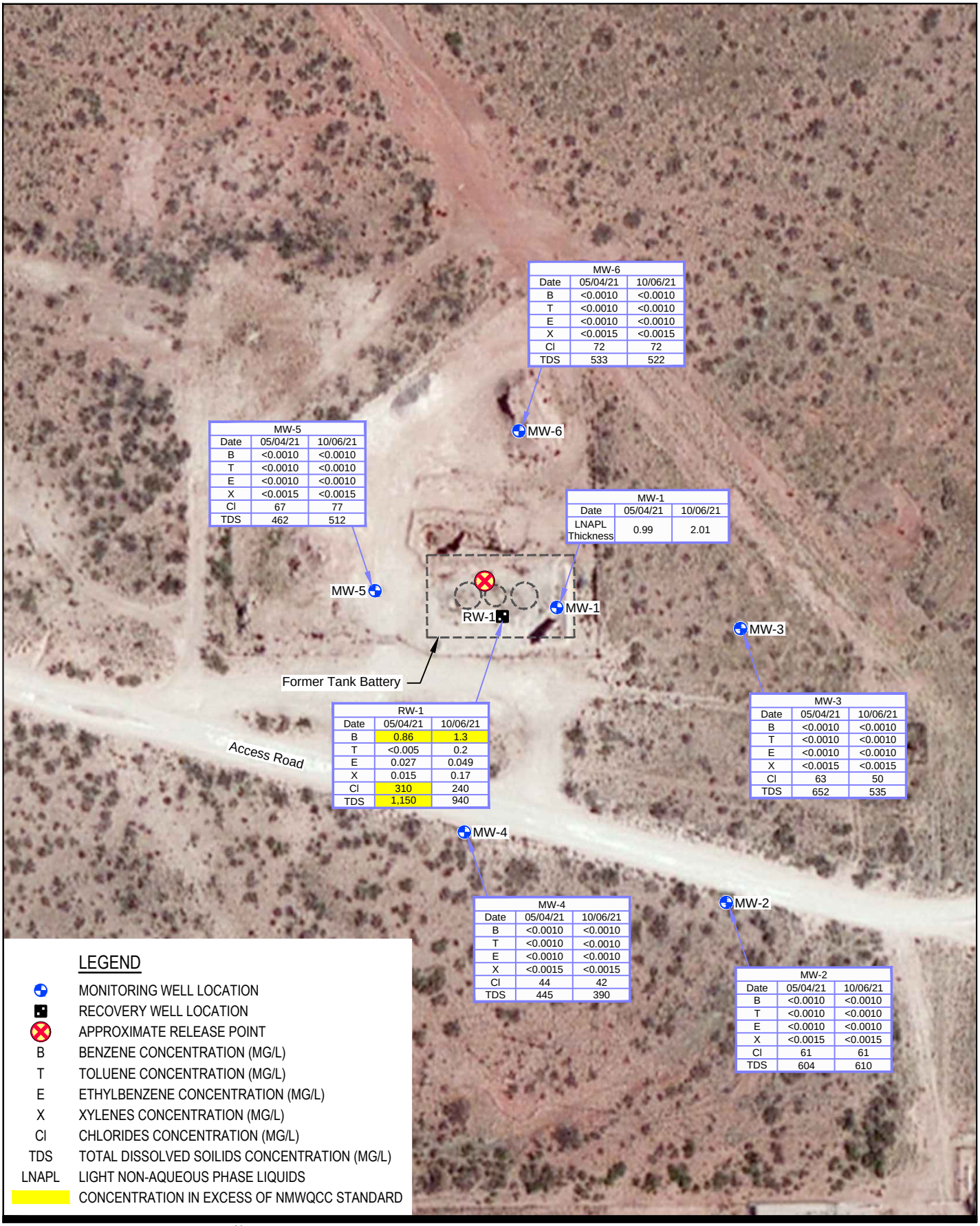

GHD

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
JAL 4 FORMER TANK BATTERY

Project No. **11209236**
Date **March 2022**

2021 GROUNDWATER CONCENTRATION AND LNAPL THICKNESS MAP

FIGURE 5

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\11209236\Digital_Design\ACAD 2017\Figures\RPT007\11209236-GHD-0000-RPT-EN-0101_DL-007.dwg
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Data Source: USDA FSA Imagery, May 10, 2014
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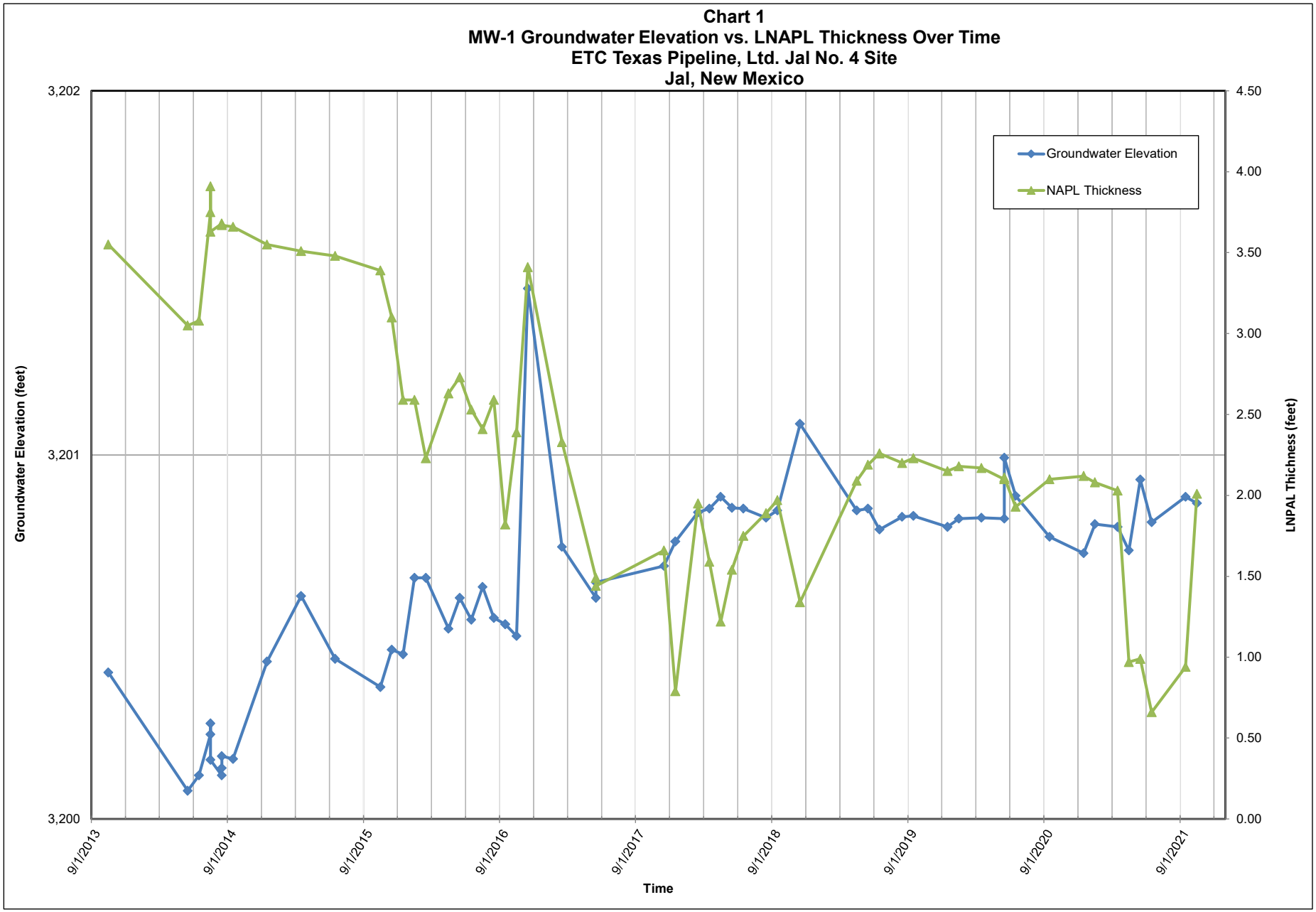
Charts

Chart 1
MW-1 Groundwater Elevation vs. LNAPL Thickness Over Time
ETC Texas Pipeline, Ltd. Jal No. 4 Site
Jal, New Mexico



Tables

Table 1
LNAPL Recovery Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well	Year	Method	LNAPL Recoved (gallons)	Imapcted Groundwater Recovered (gallons)
MW-1	2015	Skimming	8	0
	2016	Skimming	57	108
	2017	Skimming	147	18
	2018	MDPE	54.8	269
	2019	MDPE	153.65	377
	2020	MDPE	121.08	444
	2021	Absorbents	2.17	0
	Total Recovery		**543.7**	**1216**

Notes:
LNAPL - light non-aqueous phase liquids
MDPE - mobile dual phase extraction

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
RW-1	120.90	3,312.88	11/1/2013	--	112.60	--	3,200.28
			5/27/2014	--	112.79	--	3,200.09
			6/20/2014	--	112.66	--	3,200.22
			8/11/2014	--	112.99	--	3,199.89
			9/5/2014	--	112.65	--	3,200.23
			12/10/2014	--	113.47	--	3,199.41
			3/2/2015	--	112.20	--	3,200.68
			6/18/2015	--	112.39	--	3,200.49
			10/1/2015	--	112.47	--	3,200.41
			11/24/2015	--	112.42	--	3,200.46
			12/17/2015	--	112.44	--	3,200.44
			1/28/2016	--	112.30	--	3,200.58
			2/24/2016	--	112.30	--	3,200.58
			4/7/2016	--	112.36	--	3,200.52
			5/26/2016	--	112.30	--	3,200.58
			6/30/2016	--	112.35	--	3,200.53
			7/26/2016	--	112.27	--	3,200.61
			9/22/2016	--	112.40	--	3,200.48
			10/5/2016	--	112.41	--	3,200.47
			11/30/2016	--	112.22	--	3,200.66
			2/23/2017	--	112.25	--	3,200.63
			5/10/2017	--	112.34	--	3,200.54
			11/30/2017	--	112.75	--	3,200.13
			5/11/2018	--	112.15	--	3,200.73
			11/8/2018	--	112.00	--	3,200.88
			4/2/2019	--	111.98	--	3,200.90
			5/15/2019	--	111.98	--	3,200.90
			8/12/2019	--	111.99	--	3,200.89
			9/24/2019	--	111.80	--	3,201.08
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	118.30	--	3,194.58
			1/16/2020	--	111.99	--	3,200.89
			3/26/2020	--	112.02	--	3,200.86
			5/13/2020	--	111.86	--	3,201.02
			9/24/2020	--	112.04	--	3,200.84
			5/3/2021	--	111.93	--	3,200.95
			10/6/2021	--	112.00	--	3,200.88

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-1	117.70	3,313.54	10/31/2013	112.25	115.80	3.55	3,200.40
			11/1/2013	--	112.41	--	3,201.13
			5/27/2014	112.70	115.75	3.05	3,200.08
			6/20/2014	112.65	115.73	3.08	3,200.12
			7/10/2014	112.37	116.12	3.75	3,200.23
			7/24/2014	112.30	116.21	3.91	3,200.26
			7/28/2014	112.47	116.10	3.63	3,200.16
			8/5/2014	112.50	116.18	3.68	3,200.12
			8/11/2014	112.48	116.16	3.68	3,200.14
			8/18/2014	112.45	116.12	3.67	3,200.17
			9/5/2014	112.46	116.12	3.66	3,200.17
			12/10/2014	112.22	115.77	3.55	3,200.43
			3/2/2015	112.05	115.56	3.51	3,200.61
			6/18/2015	112.23	115.71	3.48	3,200.44
			10/1/2015	112.33	115.72	3.39	3,200.36
			11/24/2015	112.30	115.40	3.10	3,200.47
			12/17/2015	112.44	115.03	2.59	3,200.45
			1/28/2016	112.23	114.82	2.59	3,200.66
			2/24/2016	112.32	114.55	2.23	3,200.66
			4/7/2016	112.36	114.99	2.63	3,200.52
			5/26/2016	112.25	114.98	2.73	3,200.61
			6/30/2016	112.36	114.89	2.53	3,200.55
			7/26/2016	112.30	114.71	2.41	3,200.64
			8/25/2016	112.34	114.93	2.59	3,200.55
			9/22/2016	112.55	114.37	1.82	3,200.54
			10/5/2016	112.44	114.83	2.39	3,200.50
			11/30/2016	111.23	114.64	3.41	3,201.46
			2/23/2017	112.21	114.54	2.33	3,200.75

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-1	117.70	3,313.54	5/10/2017	112.56	114.05	1.49	3,200.61
			5/30/2017	112.53	113.97	1.44	3,200.65
			11/30/2017	112.43	114.09	1.66	3,200.70
			12/13/2017	112.58	113.37	0.79	3,200.76
			2/27/2018	112.21	114.16	1.95	3,200.84
			3/4/2018	112.29	113.88	1.59	3,200.85
			4/16/2018	112.35	113.57	1.22	3,200.89
			5/11/2018	112.30	113.84	1.54	3,200.86
			6/6/2018	112.25	114.00	1.75	3,200.85
			8/16/2018	112.24	114.13	1.89	3,200.83
			9/24/2018	112.20	114.17	1.97	3,200.85
			11/8/2018	112.12	113.46	1.34	3,201.09
			4/2/2019	112.17	114.26	2.09	3,200.85
			5/15/2019	112.14	114.33	2.19	3,200.85
			6/26/2019	112.18	114.44	2.26	3,200.80
			8/12/2019	112.16	114.36	2.20	3,200.83
			9/24/2019	112.15	114.38	2.23	3,200.83
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	112.20	114.35	2.15	3,200.80
			1/16/2020	112.17	114.35	2.18	3,200.83
			3/26/2020	112.17	114.34	2.17	3,200.83
			5/1/2020	112.19	114.29	2.10	3,200.83
			5/13/2020	112.02	114.13	2.11	3,200.99
			6/3/2020	112.17	114.10	1.93	3,200.89
			9/24/2020	112.24	NM	NM	--
			9/29/2020	112.24	114.34	2.10	3,200.78
			12/15/2020	112.28	114.40	2.12	3,200.73
			1/28/2021	112.21	114.29	2.08	3,200.81
			3/31/2021	112.23	114.26	2.03	3,200.80
			4/20/2021	112.56	113.53	0.97	3,200.74
			5/3/2021	112.36	113.35	0.99	3,200.93
			6/15/2021	112.56	113.22	0.66	3,200.82
			9/15/2021	112.42	113.36	0.94	3,200.89
			10/6/2021	112.17	114.18	2.01	3,200.87

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-2	128.10	3,312.39	11/1/2013	--	112.44	--	3,199.95
			5/27/2014	--	112.62	--	3,199.77
			6/20/2014	--	112.49	--	3,199.90
			8/11/2014	--	112.91	--	3,199.48
			9/5/2014	--	112.50	--	3,199.89
			12/10/2014	--	112.31	--	3,200.08
			3/2/2015	--	112.15	--	3,200.24
			6/18/2015	--	112.32	--	3,200.07
			10/1/2015	--	112.42	--	3,199.97
			11/24/2015	--	112.26	--	3,200.13
			12/17/2015	--	112.33	--	3,200.06
			1/28/2016	--	112.11	--	3,200.28
			2/24/2016	--	112.12	--	3,200.27
			4/7/2016	--	112.27	--	3,200.12
			5/26/2016	--	112.18	--	3,200.21
			6/30/2016	--	112.22	--	3,200.17
			7/26/2016	--	112.11	--	3,200.28
			9/22/2016	--	112.22	--	3,200.17
			10/5/2016	--	112.26	--	3,200.13
			11/30/2016	--	112.05	--	3,200.34
			5/10/2017	--	112.16	--	3,200.23
			11/30/2017	--	111.90	--	3,200.49
			5/11/2018	--	111.89	--	3,200.50
			11/8/2018	--	112.10	--	3,200.29
			4/2/2019	--	111.87	--	3,200.52
			5/15/2019	--	111.91	--	3,200.48
			8/12/2019	--	111.90	--	3,200.49
			9/24/2019	--	111.84	--	3,200.55
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	--	--	--
			1/16/2020	--	111.90	--	3,200.49
			3/26/2020	--	111.94	--	3,200.45
			5/13/2020	--	111.76	--	3,200.63
			9/24/2020	--	111.95	--	3,200.44
			5/3/2021	--	111.90	--	3,200.49
			10/6/2021	--	111.88	--	3,200.51

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-3	127.20	3,312.78	11/1/2013	--	112.75	--	3,200.03
			5/27/2014	--	112.90	--	3,199.88
			6/20/2014	--	112.47	--	3,200.31
			8/11/2014	--	112.90	--	3,199.88
			9/5/2014	--	112.79	--	3,199.99
			12/10/2014	--	112.60	--	3,200.18
			3/2/2015	--	112.41	--	3,200.37
			6/18/2015	--	112.58	--	3,200.20
			10/1/2015	--	112.63	--	3,200.15
			11/24/2015	--	112.54	--	3,200.24
			12/17/2015	--	112.61	--	3,200.17
			1/28/2016	--	112.39	--	3,200.39
			2/24/2016	--	112.37	--	3,200.41
			4/7/2016	--	112.54	--	3,200.24
			5/26/2016	--	112.44	--	3,200.34
			6/30/2016	--	112.47	--	3,200.31
			7/26/2016	--	112.37	--	3,200.41
			9/22/2016	--	112.49	--	3,200.29
			10/5/2016	--	112.53	--	3,200.25
			11/30/2016	--	112.32	--	3,200.46
			5/10/2017	--	112.41	--	3,200.37
			11/30/2017	--	112.21	--	3,200.57
			5/11/2018	--	112.16	--	3,200.62
			11/8/2018	--	112.95	--	3,199.83
			4/2/2019	--	112.14	--	3,200.64
			5/15/2019	--	112.19	--	3,200.59
			8/12/2019	--	112.17	--	3,200.61
			9/24/2019	--	112.05	--	3,200.73
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	--	--	--
			1/16/2020	--	112.14	--	3,200.64
			3/26/2020	--	112.18	--	3,200.60
			5/13/2020	--	112.05	--	3,200.73
			9/24/2020	--	112.19	--	3,200.59
			5/3/2021	--	112.10	--	3,200.68
			10/6/2021	--	112.11	--	3,200.67

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-4	128.70	3,313.19	11/1/2013	--	112.85	--	3,200.34
			5/27/2014	--	113.05	--	3,200.14
			6/20/2014	--	112.93	--	3,200.26
			8/11/2014	--	113.03	--	3,200.16
			9/5/2014	--	112.91	--	3,200.28
			12/10/2014	--	112.75	--	3,200.44
			3/2/2015	--	112.55	--	3,200.64
			6/18/2015	--	112.74	--	3,200.45
			10/1/2015	--	112.81	--	3,200.38
			11/24/2015	--	112.70	--	3,200.49
			12/17/2015	--	112.77	--	3,200.42
			1/28/2016	--	112.53	--	3,200.66
			2/24/2016	--	112.53	--	3,200.66
			4/7/2016	--	112.66	--	3,200.53
			5/26/2016	--	112.58	--	3,200.61
			6/30/2016	--	112.64	--	3,200.55
			7/26/2016	--	112.64	--	3,200.55
			9/22/2016	--	112.65	--	3,200.54
			10/5/2016	--	112.69	--	3,200.50
			11/30/2016	--	112.46	--	3,200.73
			5/10/2017	--	112.56	--	3,200.63
			11/30/2017	--	112.38	--	3,200.81
			5/11/2018	--	112.32	--	3,200.87
			11/8/2018	--	112.25	--	3,200.94
			4/2/2019	--	112.30	--	3,200.89
			5/15/2019	--	112.33	--	3,200.86
			8/12/2019	--	112.34	--	3,200.85
			9/24/2019	--	112.25	--	3,200.94
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	--	--	--
			1/16/2020	--	112.32	--	3,200.87
			3/26/2020	--	112.34	--	3,200.85
			5/13/2020	--	112.18	--	3,201.01
			9/24/2020	--	112.36	--	3,200.83
			5/3/2021	--	112.26	--	3,200.93
			10/6/2021	--	112.27	--	3,200.92

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-5	127.30	3,314.39	11/1/2013	--	113.85	--	3,200.54
			5/27/2014	--	114.05	--	3,200.34
			6/20/2014	--	113.94	--	3,200.45
			8/11/2014	--	114.03	--	3,200.36
			9/5/2014	--	113.94	--	3,200.45
			12/10/2014	--	113.76	--	3,200.63
			3/2/2015	--	113.58	--	3,200.81
			6/18/2015	--	113.17	--	3,201.22
			10/1/2015	--	113.79	--	3,200.60
			11/24/2015	--	113.69	--	3,200.70
			12/17/2015	--	113.72	--	3,200.67
			1/28/2016	--	113.53	--	3,200.86
			2/24/2016	--	113.51	--	3,200.88
			4/7/2016	--	113.62	--	3,200.77
			5/26/2016	--	113.56	--	3,200.83
			6/30/2016	--	113.61	--	3,200.78
			7/26/2016	--	113.52	--	3,200.87
			9/22/2016	--	113.63	--	3,200.76
			10/5/2016	--	113.66	--	3,200.73
			11/30/2016	--	113.45	--	3,200.94
			2/23/2017	--	113.42	--	3,200.97
			5/10/2017	--	113.55	--	3,200.84
			11/30/2017	--	113.36	--	3,201.03
			5/11/2018	--	113.26	--	3,201.13
			11/8/2018	--	113.32	--	3,201.07
			4/2/2019	--	113.28	--	3,201.11
			5/15/2019	--	113.30	--	3,201.09
			8/12/2019	--	113.31	--	3,201.08
			9/24/2019	--	113.30	--	3,201.09
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	113.33	--	3,201.06
			1/16/2020	--	113.31	--	3,201.08
			3/26/2020	--	113.33	--	3,201.06
			5/13/2020	--	113.15	--	3,201.24
			9/24/2020	--	113.33	--	3,201.06
			5/3/2021	--	113.25	--	3,201.14
			10/6/2021	--	113.27	--	3,201.12

Table 2
Monitor Well Specifications And Groundwater Elevation Data
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Total Depth (ft below ground surface)	Top of Casing (TOC) Elevation	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-6	128.00	3,314.39	11/1/2013	--	113.95	--	3,200.44
			5/27/2014	--	114.12	--	3,200.27
			6/20/2014	--	114.04	--	3,200.35
			8/11/2014	--	114.10	--	3,200.29
			9/5/2014	--	114.01	--	3,200.38
			12/10/2014	--	113.82	--	3,200.57
			3/2/2015	--	113.66	--	3,200.73
			6/18/2015	--	113.81	--	3,200.58
			10/1/2015	--	113.89	--	3,200.50
			11/24/2015	--	113.77	--	3,200.62
			12/17/2015	--	113.82	--	3,200.57
			1/28/2016	--	113.63	--	3,200.76
			2/24/2016	--	113.62	--	3,200.77
			4/7/2016	--	113.72	--	3,200.67
			5/26/2016	--	113.68	--	3,200.71
			6/30/2016	--	113.71	--	3,200.68
			7/26/2016	--	113.61	--	3,200.78
			9/22/2016	--	113.73	--	3,200.66
			10/5/2016	--	113.76	--	3,200.63
			11/30/2016	--	113.55	--	3,200.84
			2/23/2017	--	114.49	--	3,199.90
			5/10/2017	--	113.66	--	3,200.73
			11/30/2017	--	113.55	--	3,200.84
			5/11/2018	--	113.45	--	3,200.94
			11/8/2018	--	113.42	--	3,200.97
			4/2/2019	--	113.39	--	3,201.00
			5/15/2019	--	113.41	--	3,200.98
			8/12/2019	--	113.40	--	3,200.99
			9/24/2019	--	113.40	--	3,200.99
			11/11/2019	Electronic Field Data Lost			
			12/3/2019	--	113.42	--	3,200.97
			1/16/2020	--	113.42	--	3,200.97
			3/26/2020	--	113.43	--	3,200.96
			5/13/2020	--	113.26	--	3,201.13
			9/24/2020	--	113.43	--	3,200.96
			5/3/2021	--	113.34	--	3,201.05
			10/6/2021	--	113.35	--	3,201.04

Notes:
Well casing elevations from survey conducted by Asel Surveying on April 22, 2015
ft = Feet
AMSL = Above Mean Sea Level
NM = Not Measured
LNAPL = Light Non-Aqueous Phase Liquid
A specific gravity value of 0.75 was used to calculate the potentiometric water level in LNAPL-affected wells.

Table 3
Groundwater Field Parameter Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Date	Temperature (°C)	pH	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Conductivity (mS/cm)
RW-1	10/1/2015	22.23	6.79	7.87	-159.9	1069
	4/7/2016	21.2	7.17	0.08	-149.8	1260
	10/5/2016	23.43	7.21	2.71	-177	1340
	5/10/2017	20.08	6.88	0.31	-170.8	1081
	11/30/2017	19.55	8.14	2.39	-168	1496
	5/11/2018	--	7.09	--	-258.5	1141
	11/8/2018	18.96	7.1	1.03	-149.2	1790
	5/15/2019	19.55	6.5	1.84	-140.3	1525
	5/13/2020	21.4	6.95	0.95	-163	1780
	9/24/2020	21.03	7.12	0.14	-117.2	2074
	5/4/2021	22.17	7.09	0.39	-79.8	91,012
	10/6/2021	21.73	7.03	0.01	-191.4	903.1
MW-1	LNAPL Present Since October 2013					
MW-2	6/20/2014	--	--	--	--	--
	9/23/2014	--	--	--	--	--
	12/10/2014	22.3	7.33	6.8	7.33	825
	3/2/2015	--	--	--	--	--
	6/16/2015	24	7.23	913	88.2	913
	10/1/2015	21.12	7.13	7.47	112.2	947
	4/7/2016	21.1	7.23	6.51	99.3	930
	10/5/2016	23.14	7.01	6.68	215	1050
	5/10/2017	20.13	6.93	7.11	-20.3	1013
	11/30/2017	19.45	7.59	4.08	-48.9	1275
	5/11/2018	--	6.74	--	-95.8	955
	11/8/2018	17.94	7.30	--	-32.0	974
	5/15/2019	18.54	6.88	5.11	-38.9	841
	11/11/2019	Electronic Field Data Lost				
	5/13/2020	19.9	6.96	4.11	69.2	1004
	9/24/2020	21.98	7.19	5.14	76.9	947.3
	5/4/2021	22.00	7.29	2.5	29.8	45,470
	10/6/2021	21.55	7.39	3.02	33.5	553.4
MW-3	6/20/2014	--	--	--	--	--
	9/23/2014	--	--	--	--	--
	12/10/2014	22.5	6.86	0.2	-105.2	1166
	3/2/2015	--	--	--	--	--
	6/16/2015	24.9	7.26	0.1	-190.9	1065
	10/1/2015	21.67	6.90	1.27	-48.7	1011
	4/11/2016	21.5	7.15	1.40	9.1	890
	10/5/2016	23.56	7.07	3.39	47	968
	5/10/2017	20.76	7.12	1.67	-115.8	787
	11/30/2017	20.01	7.68	1.82	-135.1	1030
	5/11/2018	--	6.64	--	-160.0	927
	11/8/2018	18.12	6.95	--	-64.1	1195
	5/15/2019	19.06	6.50	3.97	-89.8	932
	11/11/2019	Electronic Field Data Lost				
	5/13/2020	21.2	7.05	0.80	-13.0	1100
	9/24/2020	22.41	6.98	1.54	-53.9	1062
	5/4/2021	21.88	6.99	0.13	-42.2	53274
	10/6/2021	22.16	7.29	1.41	-95.7	517.0

Table 3
Groundwater Field Parameter Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Well Number	Date	Temperature (°C)	pH	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Conductivity (mS/cm)
MW-4	6/20/2014	--	--	--	--	--
	9/22/2014	--	--	--	--	--
	12/10/2014	21.4	7.18	6.04	7.18	810
	3/3/2015	22	7.13	6.6	7.13	892
	6/16/2015	23.7	7.32	7.26	7.32	844
	10/1/2015	20.79	7.13	6.91	96.3	842
	4/7/2016	20.9	7.18	5.54	69.5	850
	10/5/2016	22.93	7.10	6.50	223	985
	5/10/2017	19.94	7.24	6.36	-71.1	846
	11/30/2017	18.97	7.49	2.76	-40.9	1093
	5/11/2018	--	6.75	--	-131.7	759
	11/8/2018	17.87	7.29	--	-50.6	805
	5/15/2019	18.64	6.91	6.63	-3.1	677
	11/11/2019	Electronic Field Data Lost				
	5/13/2020	20.3	7.29	4.15	60.3	710
	9/24/2020	21.66	7.46	6.16	68.7	658.9
	5/4/2021	21.55	7.52	5.97	33.9	33333
	10/6/2021	21.15	7.71	6.22	30.1	394.4
MW-5	6/20/2014	--	--	--	--	--
	9/22/2014	--	--	--	--	--
	12/10/2014	23	6.79	.16	-123.5	1489
	3/3/2015	22.2	6.79	0.21	-70.3	1688
	6/16/2015	23.4	7.02	0.17	-90.2	1204
	10/1/2015	21.18	7.03	1.34	-113.7	1138
	4/7/2016	21.2	7.44	0.49	-73.0	890
	10/5/2016	23.16	7.36	3.62	-69	979
	5/10/2017	19.97	7.23	2.20	-13.3	835
	11/30/2017	19.29	7.65	2.48	-152.9	1614
	5/11/2018	--	7.09	--	-88.5	1141
	11/8/2018	18.30	7.14	2.20	-63.8	1056
	5/15/2019	19.11	6.88	5.84	-61.2	801
	11/11/2019	Electronic Field Data Lost				
	5/13/2020	20.7	7.16	0.89	20.9	850
	9/24/2020	21.90	7.34	1.33	-31.4	807.5
	5/4/2021	22.45	7.51	0.27	-31.1	37746
	10/6/2021	22	7.57	0.86	-61.8	487.4
MW-6	6/20/2014	--	--	--	--	--
	9/22/2014	--	--	--	--	--
	12/10/2014	23	7.13	4.23	7.13	655
	3/3/2015	23.8	7.17	5.48	7.17	709
	6/16/2015	24.4	7.23	4.92	7.23	697
	10/1/2015	21.29	7.02	6.29	52.9	708
	4/7/2016	21.9	7.15	3.39	71.0	660
	10/5/2016	23.35	7.25	4.87	142	753
	5/10/2017	20.60	7.08	4.01	-93.8	656
	11/30/2017	19.58	7.87	3.62	-97.4	911
	5/11/2018	--	6.91	--	-65.1	835
	11/8/2018	17.99	7.29	3.92	-58.4	882
	5/15/2019	19.10	6.71	3.22	-44.9	806
	11/11/2019	Electronic Field Data Lost				
	5/13/2020	21.1	6.85	1.15	-14.0	1070
	9/24/2020	22.09	7.06	0.94	-0.2	891.4
	5/4/2021	23.03	7.24	0.32	10.6	41067
	10/6/2021	21.73	7.03	0.01	-191.4	903.1

Notes:
-- = Not available or not recorded
°C = degress celcius
mg/L = milligrams per liter
mV = millivolts
mS/cm = microsiemens per centimeter

Table 4
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Sample Location	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total Dissolved Solids (mg/L)	Chloride (mg/L)
NMWQCC Standards		**0.005**	**1**	**0.7**	**0.62**	**1000**	**250**
RW-1	10/1/2015	**1.00**	0.47	0.026	0.2	**1110**	**320**
	4/7/2016	**0.12**	0.11	0.012	0.11	**1070**	**290**
	4/7/2016 (DUP)	**0.12**	0.099	0.0091	0.08	**1030**	**280**
	10/5/2016	**0.57**	0.02	0.0099	0.093	950	200
	10/5/2016 (DUP)	**0.51**	0.023	0.011	0.1	--	--
	5/10/2017	**0.15**	0.025	0.011	0.035	920	180
	5/10/2017(DUP)	**0.12**	0.018	0.0091	0.024	810	190
	11/30/2017	**0.0076**	0.0069	0.0018	0.0099	610	140
	5/11/2018	**1.3**	0.39	0.025	0.53	540	100
	11/8/2018	**0.36**	0.013	0.0067	0.03	910	**250**
	5/15/2019	**1.5**	0.077	0.027	0.14	980	**280**
	11/11/2019	**0.68**	0.072	0.021	0.11	940	**250**
	5/13/2020	**1.5**	0.1	0.005	0.16	**1030**	**360**
	9/24/2020	**0.54**	0.059	0.028	0.041	**1460**	**500**
	5/4/2021	**0.86**	<0.005	0.027	0.015	**1150**	**310**
	10/6/2021	**1.3**	0.2	0.049	0.17	940	240
	10/6/2021 (DUP)	**1.3**	0.2	0.048	0.17	**1010**	240
MW-1	2/24/2013	**4.91**	**6.21**	**0.798**	**2.24**	650	57.1
	10/1/2015	Not Sampled - LNAPL					
	4/7/2016	Not Sampled - LNAPL					
	10/5/2016	Not Sampled - LNAPL					
	5/10/2017	Not Sampled - LNAPL					
	11/30/2017	Not Sampled - LNAPL					
	5/11/2018	Not Sampled - LNAPL					
	11/8/2018	Not Sampled - LNAPL					
	5/15/2019	Not Sampled - LNAPL					
	11/11/2019	Not Sampled - LNAPL					
	5/13/2020	Not Sampled - LNAPL					
	9/24/2020	Not Sampled - LNAPL					
	5/4/2021	Not Sampled - LNAPL					
	10/6/2021	Not Sampled - LNAPL					
MW-2	6/20/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	9/23/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	12/10/2014	<0.00019	<0.00018	<0.00016	<0.00051	--	--
	3/2/2015	<0.00019	<0.00018	<0.00016	<0.00051	--	--
	6/16/2015	<0.00019	<0.00018	<0.00016	<0.00051	--	--
	10/1/2015	<0.0020	<0.0020	<0.0020	<0.0030	690	65
	4/7/2016	<0.0010	<0.0010	<0.0010	<0.0015	910	60
	10/5/2016	<0.0010	<0.0010	<0.0010	<0.0015	680	57
	5/10/2017	<0.0010	<0.0010	<0.0010	<0.0015	685	62
	11/30/2017	<0.0010	<0.0010	<0.0010	<0.0015	465	33
	5/11/2018	<0.0010	<0.0010	<0.0010	<0.0015	632	59
	11/8/2018	<0.0010	<0.0010	<0.0010	<0.0015	720	61
	5/15/2019	<0.0010	<0.0010	<0.0010	<0.0015	612	62
	11/11/2019	<0.0010	<0.0010	<0.0010	<0.0015	656	62
	5/13/2020	<0.0010	<0.0010	<0.0010	<0.0015	640	65
	5/13/2020 (DUP)	<0.0010	<0.0010	<0.0010	<0.0015	700	66
	9/24/2020	<0.0010	<0.0010	<0.0010	<0.0015	650	70
	5/4/2021	<0.0010	<0.0010	<0.0010	<0.0015	604	61
	10/6/2021	<0.0010	<0.0010	<0.0010	<0.0015	610	61

Table 4
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Sample Location	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total Dissolved Solids (mg/L)	Chloride (mg/L)
MW-3	6/20/2014	<0.00100	<0.00100	<0.00100	0.0398	--	--
	9/23/2014	<0.00100	<0.00100	<0.00100	0.204	--	--
	12/10/2014	0.00066	0.00035 [1]	0.00018 [1]	0.012	--	--
	3/2/2015	0.0007 [1]	0.00067 [1]	0.00029 [1]	0.0231 [1]	--	--
	6/16/2015	0.000673	<0.000180	<0.000160	0.00282	--	--
	10/1/2015	<0.0020	<0.0020	<0.0020	<0.0030	200	120
	4/11/2016	<0.0010	<0.0010	<0.0010	<0.0015	530	79
	10/5/2016	<0.0010	<0.0010	<0.0010	<0.0015	580	64
	5/10/2017	<0.0010	<0.0010	<0.0010	<0.0015	630	50
	11/30/2017	<0.0010	<0.0010	<0.0010	<0.0015	640	49
	5/11/2018	<0.0010	<0.0010	<0.0010	0.0075	602	72
	11/8/2018	<0.0010	<0.0010	<0.0010	0.020	790	100
	5/15/2019	<0.0010	<0.0010	<0.0010	<0.0015	700	92
	11/11/2019	<0.0010	<0.0010	<0.0010	<0.0015	665	75
	5/13/2020	<0.0010	<0.0010	<0.0010	<0.0015	650	88
	9/24/2020	<0.0010	<0.0010	<0.0010	<0.0015	682	88
	9/24/2020 (DUP)	<0.0010	<0.0010	<0.0010	<0.0015	694	90
	5/4/2021	<0.0010	<0.0010	<0.0010	<0.0015	652	63
	10/6/2021	<0.0010	<0.0010	<0.0010	<0.0015	535	50
MW-4	6/20/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	9/22/2014	<0.00100	<0.00100	<0.00100	0.0031	--	--
	12/10/2014	<0.00019	0.00020 [1]	<0.00016	<0.00051	--	--
	3/3/2015	<0.00019	<0.00018	<0.00016	<0.00051	560	70
	6/16/2015	<0.00019	0.000197*[1]	<0.00016	<0.00051	--	--
	10/1/2015	<0.0020	<0.0020	<0.0020	<0.0030	560	69
	4/7/2016	<0.0010	<0.0010	<0.0010	<0.0015	680	71
	10/5/2016	<0.0010	<0.0010	<0.0010	<0.0015	600	79
	5/10/2017	<0.0010	<0.0010	<0.0010	<0.0015	620	71
	11/30/2017	<0.0010	<0.0010	<0.0010	<0.0015	510	63
	5/11/2018	<0.0010	<0.0010	<0.0010	<0.0015	526	60
	11/8/2018	<0.0010	<0.0010	<0.0010	<0.0015	520	56
	11/8/2018 (DUP)	<0.0010	<0.0010	<0.0010	<0.0015	540	57
	5/15/2019	<0.0010	<0.0010	<0.0010	<0.0015	500	55
	11/11/2019	<0.0010	<0.0010	<0.0010	<0.0015	482	52
	5/13/2020	<0.0010	<0.0010	<0.0010	<0.0015	464	50
	9/24/2020	<0.0010	<0.0010	<0.0010	<0.0015	502	52
	5/4/2021	<0.0010	<0.0010	<0.0010	<0.0015	445	44
	10/6/2021	<0.0010	<0.0010	<0.0010	<0.0015	390	42

Table 4
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Jal 4 Former Tank Battery
Lea County, New Mexico

Sample Location	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total Dissolved Solids (mg/L)	Chloride (mg/L)
MW-5	6/20/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	9/22/2014	<0.00100	<0.00100	<0.00100	0.0014	--	--
	12/10/2014	**0.016**	0.00019 [1]	0.00020 [1]	0.00086 [1]	--	--
	3/3/2015	0.0043	<0.00018	<0.00016	0.00075 [1]	930	230
	6/16/2015	0.000503	0.000262*[1]	<0.000160	0.000521 [1]	--	--
	10/1/2015	0.0037	<0.0010	<0.0010	<0.0015	355	140
	4/7/2016	<0.0010	<0.0010	<0.0010	<0.0015	615	95
	10/5/2016	<0.0010	<0.0010	<0.0010	<0.0015	516	70
	5/10/2017	<0.0010	<0.0010	<0.0010	<0.0015	486	81
	11/30/2017	<0.0010	<0.0010	<0.0010	<0.0015	650	120
	5/11/2018	<0.0010	<0.0010	<0.0010	<0.0015	712	170
	11/8/2018	<0.0010	<0.0010	<0.0010	<0.0015	585	130
	5/15/2019	<0.0010	<0.0010	<0.0010	<0.0015	644	150
	5/15/2019 (DUP)	<0.0010	<0.0010	<0.0010	<0.0015	650	150
	11/11/2019	<0.0010	<0.0010	<0.0010	<0.0015	628	130
	5/13/2020	<0.0010	<0.0010	<0.0010	<0.0015	532	78
	9/24/2020	<0.0010	<0.0010	<0.0010	<0.0015	495	87
	5/4/2021	<0.0010	<0.0010	<0.0010	<0.0015	462	67
	10/6/2021	<0.0010	<0.0010	<0.0010	<0.0015	512	77
MW-6	6/20/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	9/22/2014	<0.00100	<0.00100	<0.00100	<0.00100	--	--
	12/10/2014	<0.00019	0.0020 [1]	<0.00016	<0.00051	--	--
	3/3/2015	<0.00019	<0.00018	<0.00016	<0.00051	430	56
	6/16/2015	<0.00019	0.000229*[1]	<0.00016	<0.00051	--	--
	10/1/2015	<0.0010	<0.0010	<0.0010	<0.0015	520	68
	4/7/2016	<0.0010	<0.0010	<0.0010	<0.0015	476	58
	10/5/2016	<0.0010	<0.0010	<0.0010	<0.0015	460	52
	5/10/2017	<0.0010	<0.0010	<0.0010	<0.0015	464	59
	11/30/2017	<0.0010	<0.0010	<0.0010	<0.0015	444	63
	5/11/2018	<0.0010	<0.0010	<0.0010	<0.0015	320	51
	5/11/2018 (DUP)	<0.0010	<0.0010	<0.0010	<0.0015	336	52
	11/8/2018	<0.0010	<0.0010	<0.0010	<0.0015	550	100
	5/15/2019	<0.0010	<0.0010	<0.0010	<0.0015	576	88
	11/11/2019	<0.0010	<0.0010	<0.0010	<0.0015	620	84
	5/13/2020	<0.0010	<0.0010	<0.0010	<0.0015	644	95
	9/24/2020	<0.0010	<0.0010	<0.0010	<0.0015	495	87
	5/4/2021	<0.0010	<0.0010	<0.0010	<0.0015	533	72
	10/6/2021	<0.0010	<0.0010	<0.0010	<0.0015	522	72

Notes:

* = Indicates analyte also noted in method blank
[1] = Denotes J-Flag value
NMWQCC = New Mexico Water Quality Control Commission
mg/L = milligrams per liter
-- = Not analyzed

Appendices

Appendix A

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 13, 2021

Christine Mathews
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Jal 4 OrderNo.: 2105238

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/6/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **2105238**
Date Reported: **5/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 2105238
Project: Jal 4

Lab ID: 2105238-001 **Collection Date:** 5/4/2021 5:00:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-2 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	61	5.0		mg/L	10	5/6/2021 1:07:42 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	604	20.0	*	mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/7/2021 6:37:49 PM	A77255
Toluene	ND	1.0		µg/L	1	5/7/2021 6:37:49 PM	A77255
Ethylbenzene	ND	1.0		µg/L	1	5/7/2021 6:37:49 PM	A77255
Xylenes, Total	ND	1.5		µg/L	1	5/7/2021 6:37:49 PM	A77255
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%Rec	1	5/7/2021 6:37:49 PM	A77255
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	5/7/2021 6:37:49 PM	A77255
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/7/2021 6:37:49 PM	A77255
Surr: Toluene-d8	97.5	70-130		%Rec	1	5/7/2021 6:37:49 PM	A77255

Lab ID: 2105238-002 **Collection Date:** 5/4/2021 4:10:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-3 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	63	5.0		mg/L	10	5/6/2021 1:59:11 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	652	20.0	*	mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/7/2021 8:04:02 PM	A77255
Toluene	ND	1.0		µg/L	1	5/7/2021 8:04:02 PM	A77255
Ethylbenzene	ND	1.0		µg/L	1	5/7/2021 8:04:02 PM	A77255
Xylenes, Total	ND	1.5		µg/L	1	5/7/2021 8:04:02 PM	A77255
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	5/7/2021 8:04:02 PM	A77255
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	5/7/2021 8:04:02 PM	A77255
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	5/7/2021 8:04:02 PM	A77255
Surr: Toluene-d8	101	70-130		%Rec	1	5/7/2021 8:04:02 PM	A77255

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

Qualifiers:

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

Analytical Report
Lab Order: **2105238**
Date Reported: **5/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 2105238
Project: Jal 4

Lab ID: 2105238-003 **Collection Date:** 5/4/2021 6:00:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-4 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	44	5.0		mg/L	10	5/6/2021 6:03:24 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	445	20.0		mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/7/2021 8:32:46 PM	A77255
Toluene	ND	1.0		µg/L	1	5/7/2021 8:32:46 PM	A77255
Ethylbenzene	ND	1.0		µg/L	1	5/7/2021 8:32:46 PM	A77255
Xylenes, Total	ND	1.5		µg/L	1	5/7/2021 8:32:46 PM	A77255
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%Rec	1	5/7/2021 8:32:46 PM	A77255
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	5/7/2021 8:32:46 PM	A77255
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/7/2021 8:32:46 PM	A77255
Surr: Toluene-d8	97.3	70-130		%Rec	1	5/7/2021 8:32:46 PM	A77255

Lab ID: 2105238-004 **Collection Date:** 5/4/2021 3:20:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-5 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	67	5.0		mg/L	10	5/6/2021 6:29:10 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	462	20.0		mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0	P	µg/L	1	5/7/2021 9:01:31 PM	A77255
Toluene	ND	1.0	P	µg/L	1	5/7/2021 9:01:31 PM	A77255
Ethylbenzene	ND	1.0	P	µg/L	1	5/7/2021 9:01:31 PM	A77255
Xylenes, Total	ND	1.5	P	µg/L	1	5/7/2021 9:01:31 PM	A77255
Surr: 1,2-Dichloroethane-d4	90.6	70-130	P	%Rec	1	5/7/2021 9:01:31 PM	A77255
Surr: 4-Bromofluorobenzene	101	70-130	P	%Rec	1	5/7/2021 9:01:31 PM	A77255
Surr: Dibromofluoromethane	101	70-130	P	%Rec	1	5/7/2021 9:01:31 PM	A77255
Surr: Toluene-d8	100	70-130	P	%Rec	1	5/7/2021 9:01:31 PM	A77255

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

Qualifiers:

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

Analytical Report
Lab Order: **2105238**
Date Reported: **5/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 2105238
Project: Jal 4

Lab ID: 2105238-005 **Collection Date:** 5/4/2021 2:30:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-6 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	72	5.0		mg/L	10	5/6/2021 6:54:54 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	533	20.0	*	mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/7/2021 9:30:16 PM	A77255
Toluene	ND	1.0		µg/L	1	5/7/2021 9:30:16 PM	A77255
Ethylbenzene	ND	1.0		µg/L	1	5/7/2021 9:30:16 PM	A77255
Xylenes, Total	ND	1.5		µg/L	1	5/7/2021 9:30:16 PM	A77255
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%Rec	1	5/7/2021 9:30:16 PM	A77255
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/7/2021 9:30:16 PM	A77255
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/7/2021 9:30:16 PM	A77255
Surr: Toluene-d8	102	70-130		%Rec	1	5/7/2021 9:30:16 PM	A77255

Lab ID: 2105238-006 **Collection Date:** 5/4/2021 12:33:00 PM
Client Sample ID: GW-11209236-050421-CN-MW-RW-1 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	310	50	*	mg/L	100	5/6/2021 7:33:30 PM	R77215
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **MH**	
Total Dissolved Solids	1150	40.0	*D	mg/L	1	5/12/2021 2:14:00 PM	59936
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	860	50		µg/L	50	5/7/2021 9:58:57 PM	A77255
Toluene	ND	5.0		µg/L	5	5/7/2021 10:27:32 PM	A77255
Ethylbenzene	27	5.0		µg/L	5	5/7/2021 10:27:32 PM	A77255
Xylenes, Total	15	7.5		µg/L	5	5/7/2021 10:27:32 PM	A77255
Surr: 1,2-Dichloroethane-d4	89.3	70-130		%Rec	5	5/7/2021 10:27:32 PM	A77255
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	5	5/7/2021 10:27:32 PM	A77255
Surr: Dibromofluoromethane	99.6	70-130		%Rec	5	5/7/2021 10:27:32 PM	A77255
Surr: Toluene-d8	95.5	70-130		%Rec	5	5/7/2021 10:27:32 PM	A77255

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105238**

13-May-21

Client: GHD

Project: Jal 4

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R77215**	RunNo: **77215**
Prep Date:	Analysis Date: **5/6/2021**	SeqNo: **2738182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **2105238-001BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **GW-11209236-05042**	Batch ID: **R77215**	RunNo: **77215**
Prep Date:	Analysis Date: **5/6/2021**	SeqNo: **2738185** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	110	5.0	50.00	61.00	91.3	84.2	117			

Sample ID: **2105238-001BMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **GW-11209236-05042**	Batch ID: **R77215**	RunNo: **77215**
Prep Date:	Analysis Date: **5/6/2021**	SeqNo: **2738186** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	100	5.0	50.00	61.00	86.8	84.2	117	2.15	20	

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R77215**	RunNo: **77215**
Prep Date:	Analysis Date: **5/6/2021**	SeqNo: **2738190** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.4	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105238**
13-May-21

Client: GHD
Project: Jal 4

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A77255** RunNo: **77255**
Prep Date: Analysis Date: **5/7/2021** SeqNo: **2739954** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.6	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A77255** RunNo: **77255**
Prep Date: Analysis Date: **5/7/2021** SeqNo: **2739955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **2105238-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GW-11209236-05042** Batch ID: **A77255** RunNo: **77255**
Prep Date: Analysis Date: **5/7/2021** SeqNo: **2739969** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.1	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **2105238-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GW-11209236-05042** Batch ID: **A77255** RunNo: **77255**
Prep Date: Analysis Date: **5/7/2021** SeqNo: **2739970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.8	70	130	2.06	20	
Toluene	19	1.0	20.00	0	94.9	70	130	11.0	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105238**
13-May-21

Client: GHD
Project: Jal 4

Sample ID: **2105238-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GW-11209236-05042** Batch ID: **A77255** RunNo: **77255**
Prep Date: Analysis Date: **5/7/2021** SeqNo: **2739970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		94.9	70	130	0	0	
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105238**

13-May-21

Client: GHD

Project: Jal 4

Sample ID: **MB-59936**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **59936**	RunNo: **77328**
Prep Date: **5/11/2021**	Analysis Date: **5/12/2021**	SeqNo: **2743917** 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-59936**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **59936**	RunNo: **77328**
Prep Date: **5/11/2021**	Analysis Date: **5/12/2021**	SeqNo: **2743918** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	996	20.0	1000	0	99.6	80	120			

Sample ID: **2105238-005BDUP**	SampType: **DUP**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **GW-11209236-05042**	Batch ID: **59936**	RunNo: **77328**
Prep Date: **5/11/2021**	Analysis Date: **5/12/2021**	SeqNo: **2743937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	545	20.0						2.23	10	*

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 2105238 | RcptNo: 1

Received By: Juan Rojas 5/6/2021 7:30:00 AM

Completed By: Desiree Dominguez 5/6/2021 8:50:25 AM

Reviewed By: JR 5/6/21

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: SPA 5.6.21

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good				

Chain-of-Custody Record

Client: GHD

Mailing Address: on File

Phone #: 505 269 0088

email or Fax#: christine.Mathews@ghd.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5 Days
☑ Standard ☐ Rush

Project Name: Jal-4

Project #: 11209236

Project Manager: Christine Mathews

Sampler: CN

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.3+0.2=0.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2105238	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BTEX 8260	TPH	Chloride
5-4-21	1700	W	GW-11209236-050421-CN-MW-2	Various	HCl	-001											X	X	X
	1610		GW-11209236-050421-CN-MW-3			-002											X	X	X
	1800		GW-11209236-050421-CN-MW-4			-003											X	X	X
	1520		GW-11209236-050421-CN-MW-5			-004											X	X	X
	1430		GW-11209236-050421-CN-MW-6			-005											X	X	X
↓	1233	↓	GW-11209236-050421-CN-RW-1	↓	↓	-006											X	X	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5-5-21	1300 1700				5/5/21	1300
5/5/21	1900			courier	5/6/21	7:30

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 20, 2021

Christine Mathews
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Jal-4 OrderNo.: 2110398

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/7/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-MW
Project: Jal-4
Collection Date: 10/6/2021 10:05:00 AM
Lab ID: 2110398-001 **Matrix:** AQUEOUS **Received Date:** 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	61	5.0		mg/L	10	10/8/2021 11:26:40 PM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	610	100	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/7/2021 7:20:00 PM	R81874
Toluene	ND	1.0		µg/L	1	10/7/2021 7:20:00 PM	R81874
Ethylbenzene	ND	1.0		µg/L	1	10/7/2021 7:20:00 PM	R81874
Xylenes, Total	ND	1.5		µg/L	1	10/7/2021 7:20:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	1	10/7/2021 7:20:00 PM	R81874
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/7/2021 7:20:00 PM	R81874
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/7/2021 7:20:00 PM	R81874
Surr: Toluene-d8	93.0	70-130		%Rec	1	10/7/2021 7:20:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-MW
Project: Jal-4
Collection Date: 10/6/2021 10:45:00 AM
Lab ID: 2110398-002 **Matrix:** AQUEOUS **Received Date:** 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	50	5.0		mg/L	10	10/8/2021 11:51:29 PM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	535	100	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/7/2021 8:29:00 PM	R81874
Toluene	ND	1.0		µg/L	1	10/7/2021 8:29:00 PM	R81874
Ethylbenzene	ND	1.0		µg/L	1	10/7/2021 8:29:00 PM	R81874
Xylenes, Total	ND	1.5		µg/L	1	10/7/2021 8:29:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	10/7/2021 8:29:00 PM	R81874
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	10/7/2021 8:29:00 PM	R81874
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/7/2021 8:29:00 PM	R81874
Surr: Toluene-d8	96.1	70-130		%Rec	1	10/7/2021 8:29:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-MW
Project: Jal-4
Collection Date: 10/6/2021 9:30:00 AM
Lab ID: 2110398-003
Matrix: AQUEOUS
Received Date: 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	42	5.0		mg/L	10	10/9/2021 12:41:06 AM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	390	100	D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/7/2021 8:52:00 PM	R81874
Toluene	ND	1.0		µg/L	1	10/7/2021 8:52:00 PM	R81874
Ethylbenzene	ND	1.0		µg/L	1	10/7/2021 8:52:00 PM	R81874
Xylenes, Total	ND	1.5		µg/L	1	10/7/2021 8:52:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	10/7/2021 8:52:00 PM	R81874
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	10/7/2021 8:52:00 PM	R81874
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/7/2021 8:52:00 PM	R81874
Surr: Toluene-d8	93.0	70-130		%Rec	1	10/7/2021 8:52:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-MW
Project: Jal-4
Collection Date: 10/6/2021 12:45:00 PM
Lab ID: 2110398-004 **Matrix:** AQUEOUS **Received Date:** 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	77	5.0		mg/L	10	10/9/2021 1:05:54 AM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	512	40.0	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/7/2021 9:16:00 PM	R81874
Toluene	ND	1.0		µg/L	1	10/7/2021 9:16:00 PM	R81874
Ethylbenzene	ND	1.0		µg/L	1	10/7/2021 9:16:00 PM	R81874
Xylenes, Total	ND	1.5		µg/L	1	10/7/2021 9:16:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%Rec	1	10/7/2021 9:16:00 PM	R81874
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	10/7/2021 9:16:00 PM	R81874
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/7/2021 9:16:00 PM	R81874
Surr: Toluene-d8	92.8	70-130		%Rec	1	10/7/2021 9:16:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-MW
Project: Jal-4
Collection Date: 10/6/2021 11:45:00 AM
Lab ID: 2110398-005
Matrix: AQUEOUS
Received Date: 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	72	5.0		mg/L	10	10/9/2021 1:30:43 AM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	522	40.0	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/7/2021 9:39:00 PM	R81874
Toluene	1.5	1.0		µg/L	1	10/7/2021 9:39:00 PM	R81874
Ethylbenzene	ND	1.0		µg/L	1	10/7/2021 9:39:00 PM	R81874
Xylenes, Total	3.8	1.5		µg/L	1	10/7/2021 9:39:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	10/7/2021 9:39:00 PM	R81874
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	10/7/2021 9:39:00 PM	R81874
Surr: Dibromofluoromethane	107	70-130		%Rec	1	10/7/2021 9:39:00 PM	R81874
Surr: Toluene-d8	94.5	70-130		%Rec	1	10/7/2021 9:39:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: GW-11209236-100621-CN-RW-
Project: Jal-4
Collection Date: 10/6/2021 2:00:00 PM
Lab ID: 2110398-006 **Matrix:** AQUEOUS **Received Date:** 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	240	50		mg/L	100	10/9/2021 2:32:45 AM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	940	200	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	1300	50		µg/L	50	10/7/2021 10:02:00 PM	R81874
Toluene	200	5.0		µg/L	5	10/7/2021 10:25:00 PM	R81874
Ethylbenzene	49	5.0		µg/L	5	10/7/2021 10:25:00 PM	R81874
Xylenes, Total	170	7.5		µg/L	5	10/7/2021 10:25:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	95.0	70-130		%Rec	5	10/7/2021 10:25:00 PM	R81874
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	5	10/7/2021 10:25:00 PM	R81874
Surr: Dibromofluoromethane	97.2	70-130		%Rec	5	10/7/2021 10:25:00 PM	R81874
Surr: Toluene-d8	95.4	70-130		%Rec	5	10/7/2021 10:25:00 PM	R81874

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

Qualifiers:

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

Analytical Report
Lab Order **2110398**
Date Reported: **10/20/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Client Sample ID:** GW-11209236-100621-CN-Dup
Project: Jal-4 **Collection Date:** 10/6/2021
Lab ID: 2110398-007 **Matrix:** AQUEOUS **Received Date:** 10/7/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Chloride	240	50		mg/L	100	10/9/2021 3:22:21 AM	A81916
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1010	200	*D	mg/L	1	10/14/2021 2:49:00 PM	63228
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	1300	50		µg/L	50	10/7/2021 10:49:00 PM	R81874
Toluene	200	5.0		µg/L	5	10/7/2021 11:12:00 PM	R81874
Ethylbenzene	48	5.0		µg/L	5	10/7/2021 11:12:00 PM	R81874
Xylenes, Total	170	7.5		µg/L	5	10/7/2021 11:12:00 PM	R81874
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	5	10/7/2021 11:12:00 PM	R81874
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	5	10/7/2021 11:12:00 PM	R81874
Surr: Dibromofluoromethane	101	70-130		%Rec	5	10/7/2021 11:12:00 PM	R81874
Surr: Toluene-d8	91.6	70-130		%Rec	5	10/7/2021 11:12:00 PM	R81874

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110398**

20-Oct-21

Client: GHD

Project: Jal-4

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A81916**	RunNo: **81916**
Prep Date:	Analysis Date: **10/8/2021**	SeqNo: **2899061** 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: **A81916**	RunNo: **81916**
Prep Date:	Analysis Date: **10/8/2021**	SeqNo: **2899062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.3	90	110			

Sample ID: **2110398-005BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **GW-11209236-10062**	Batch ID: **A81916**	RunNo: **81916**
Prep Date:	Analysis Date: **10/9/2021**	SeqNo: **2899074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	120	5.0	50.00	71.92	97.4	86.3	114			

Sample ID: **2110398-005BMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **GW-11209236-10062**	Batch ID: **A81916**	RunNo: **81916**
Prep Date:	Analysis Date: **10/9/2021**	SeqNo: **2899075** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	120	5.0	50.00	71.92	98.6	86.3	114	0.499	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110398**

20-Oct-21

Client: GHD

Project: Jal-4

Sample ID: **100ng 8260 lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **R81874**	RunNo: **81874**						
Prep Date:	Analysis Date: **10/7/2021**	SeqNo: **2897606**	Units: **µg/L**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.4	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.7	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **R81874**	RunNo: **81874**						
Prep Date:	Analysis Date: **10/7/2021**	SeqNo: **2897607**	Units: **µg/L**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Sample ID: **2110398-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **GW-11209236-10062**	Batch ID: **R81874**	RunNo: **81874**						
Prep Date:	Analysis Date: **10/7/2021**	SeqNo: **2897613**	Units: **µg/L**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID: **2110398-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **GW-11209236-10062**	Batch ID: **R81874**	RunNo: **81874**						
Prep Date:	Analysis Date: **10/7/2021**	SeqNo: **2897614**	Units: **µg/L**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130	5.86	20	
Toluene	20	1.0	20.00	0	97.6	70	130	3.29	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2110398**
20-Oct-21

Client: GHD
Project: Jal-4

Sample ID: **2110398-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GW-11209236-10062** Batch ID: **R81874** RunNo: **81874**
Prep Date: Analysis Date: **10/7/2021** SeqNo: **2897614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		104	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		93.6	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110398**

20-Oct-21

Client: GHD

Project: Jal-4

Sample ID: **MB-63228**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **63228**	RunNo: **82057**
Prep Date: **10/12/2021**	Analysis Date: **10/14/2021**	SeqNo: **2905926** 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-63228**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **63228**	RunNo: **82057**
Prep Date: **10/12/2021**	Analysis Date: **10/14/2021**	SeqNo: **2905927** Units: **mg/L**

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **GHD** Work Order Number: **2110398** RcptNo: **1**

Received By: **Cheyenne Cason** **10/7/2021 7:45:00 AM**

Completed By: **Cheyenne Cason** **10/7/2021 1:22:58 PM**

Reviewed By: KPG 10/07/21

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: JR 10/7/21

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good				

Chain-of-Custody Record

Client: GHD

Mailing Address:

Phone #: 505 269 0088

email or Fax#: Christine.Mathews@ghd.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Jal-4

Project #: 11209236

Project Manager: Christine Mathews

Sampler: CN

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.3+0.1=0.4 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2110398	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BTEX 8260	Chloride 300	TDS 2540			
10-6-21	1005	GW	GW-11209236-100621-CN-MW-2	VOA:3	HCl	001											X	X	X			
	1045		GW-11209236-100621-CN-MW-3			002											X	X	X			
	0930		GW-11209236-100621-CN-MW-4			003											X	X	X			
	1245		GW-11209236-100621-CN-MW-5			004											X	X	X			
	1145		GW-11209236-100621-CN-MW-6			005											X	X	X			
	1400		GW-11209236-100621-CN-~~MW-9~~			006											X	X	X			
↓	–	↓	GW-11209236-100621-CN-DUP	↓	↓	007											X	X	X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10-6-21	1700				10/6/21	1700
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10.6.21	1900			courier	10/7/21	0745

Remarks:

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

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 118910

CONDITIONS

Operator: ETC Texas Pipeline, Ltd. 8111 Westchester Drive Dallas, TX 75225	OGRID: 371183
	Action Number: 118910
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2021 Annual Groundwater Monitoring Report: Content Satisfactory 1. Continue quarterly site visits as planned & scheduled 2. Absorbent socks are not considered a remediation method for removing LNAPL, unless it is present at trace/residual levels. Please propose other options for removal of LNAPL in MW-1 in the 2024 annual report. 3. Continue to conduct sampling on a semi-annual basis. 4. Submit the 2022 and 2023 annual reports unless they have already been submitted to OCD in the online portal. 5. Submit the 2024 Annual Report by April 1, 2025.	6/4/2024