2021 Annual Groundwater Monitoring Report

Boyd Compressor Station
Section 26, Township 22 South, Range 37 East Lea County, New Mexico
AP-106

ETC Texas Pipeline, Ltd.

May 20, 2022

Review of the 2021 Annual Groundwater Monitoring Report for the Boyd Compressor Station has been accepted for the record with contents unsatisfactory for completion and termination:
1. In order to meet the requirements for abatement completion at the site, all constituents of concern, namely chloride, must demonstrate levels below the allowable concentrations in the NM WQCC human health standards for eight consecutive quarters, or an alternate lesser amount of samples, approved by the OCD.
2. An Abatement Completion report must be submitted to OCD with all the met requirements as per 19.15.30.9 of the NMAC ***including*** a one time sampling work plan of the vadose zone as per 19.15.30.9 paragraph D of the NMAC.
3. Continue to sample on a quarterly basis until chloride is below the allowable concentrations in groundwater or propose a remediation method to OCD to mitigate chlorides in groundwater at the site.
4. Submit the 2022, 2023 Annual Reports unless they've already been submitted through the portal.
5. Submit the 2024 Annual Groundwater Report to OCD by April 1, 2025.

→ **The Power of Commitment**

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1. Introduction

This report presents the results of groundwater monitoring during 2021 at the ETC Texas Pipeline, Ltd. (ETC), Boyd Compressor Station (Site). The Site is a decommissioned compressor station located in Section 26, Township 22 South, Range 37 East in Lea County, New Mexico. The Site is located approximately 5 miles south of Eunice, New Mexico and 1 mile east of New Mexico Highway 18 (Figure 1). Site details are shown on Figure 2. The property of the former compressor station is owned by Mr. R.D. Simms of Eunice, New Mexico and the Site is regulated by the New Mexico Oil Conservation Division (NMOCD).

1.1 Background

Soil investigation and sampling at the Site began on September 18, 2007 using a hand auger. Soil samples collected at two locations indicated hydrocarbon impacts. Historical records indicate that soil boring (SB) SB-1 was located in the vicinity of existing monitoring well (MW) MW-1, although the location of SB-2 is unclear.

Basin Environmental Services (Basin) oversaw the removal of an 80-barrel (bbl) tank and a 460-bbl tank on June 17, 2008. During removal, corrosion was observed around the bolts used to join the two halves of one of the tanks. The corrosion appeared to have allowed liquids to release from the tank into surrounding soil.

Decommissioning of the compressor station began June 17, 2008. Soil excavation occurred in conjunction with Site decommissioning due to impacted soil encountered during hand auger and tank removal activities. Excavated soil was stockpiled on-site and sampled. Soil exceeding NMOCD guidelines was hauled off-site.

The NMOCD approved backfilling of the excavation in December 2008. The excavation was backfilled to a depth of 10 feet (ft) below ground surface (bgs) and a 20-millimeter polyethylene liner measuring 20 ft by 20 ft was installed. The upper 10 ft of the excavation was backfilled to grade.

In January 2009, four groundwater monitoring wells were installed to a total depth of approximately 65 ft bgs. MW-1 was installed immediately south (downgradient) of the excavation and MW-2, MW-3, and MW-4 were installed north, southwest, and southeast of the excavation, respectively. MW-2, MW-3, and MW-4 are located approximately 70 ft away from MW-1 (see Figure 2).

The compressor station operated under New Mexico Discharge Plan and Permit GW-269. The discharge permit was rescinded by the NMOCD in February 2012, and Abatement Plan number AP-106 was issued.

Consulting duties were transferred to GHD during August 2015. A groundwater pumping test was performed by GHD between October 26, 2015 and October 29, 2015. The pumping event consisted of pumping approximately 4,900 gallons of groundwater from MW-1 at an average of approximately 3.0 gallons per minute for a total of 26.5 hours. Both the field screening and laboratory analytical results showed a decreasing trend in chloride concentrations of approximately 500 to 600 milligrams per liter (mg/L) over the duration of the event. Chloride concentrations observed in MW-1 during the December 2015 sampling event were equivalent to the chloride concentration observed at the beginning of the pumping event (1,700 mg/l). However, these concentrations were significantly lower than those observed during the September 30, 2015 event (3,100 mg/l).

A formal request for closure with documented justification was submitted to the NMOCD on June 7, 2018. As of the date of this report, the request has not been approved.

2. 2021 Groundwater Monitoring

2.1 Groundwater Monitoring Summary

Laboratory analytical results indicate that historic groundwater samples collected from all Site monitoring wells were below laboratory detection limits for benzene, toluene, ethylbenzene, and xylene (BTEX). Site wells have been below laboratory detection limits or below New Mexico Water Quality Control Commission (NMWQCC) standard for BTEX since monitoring began in 2009. Due to detections consistently being below NMWQCC standards or laboratory detection limits, GHD discontinued analysis of BTEX as of September 2015 and started a semi-annual sampling schedule in May 2017.The monitoring schedule was reduced to an annual event in 2019.

During the April 2021 annual event, depth to groundwater was measured from professionally surveyed top of casing elevations in each monitoring well using a decontaminated oil/water interface probe. Groundwater elevations were calculated for the event and were added to the summary of historical groundwater elevations for the Site presented in Table 1.

Groundwater flow direction in April 2021 was generally towards the south-southeast at a gradient of 0.001 feet/foot, consistent with historical Site data. A groundwater gradient map has been prepared for the April 2021 event and is included as Figure 3.

2.2 Groundwater Monitoring Methodology

Monitoring wells were 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 calibrated multi parameter groundwater quality meter and were recorded on GHD groundwater sampling field forms.

Groundwater samples were collected on April 21, 2021. Samples were placed in laboratory-prepared bottles, packed on ice, and delivered under chain-of-custody documentation to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. Groundwater samples were analyzed for chloride by Environmental Protection Agency Method 300.0 and for total dissolved solids (TDS) by Standard Method 2540C.

2.3 Groundwater Monitoring Analytical Results

Groundwater collected from MW-1 has consistently exceeded the NMWQCC standard for chloride. During the 2021 monitoring event, the concentration of chloride in MW-1 was 400 milligrams per liter (mg/L) (see Figure 4). The NMWQCC standard for chloride is 250 mg/L. Analytical results from samples collected from MW-1 show a general decreasing trend in chloride concentrations over time as shown on Figure 5. Groundwater from MW-1 has also consistently exceeded the standard for TDS when sampled for this constituent. The April 2021 result was 1,320 mg/L. The NMWQCC standard for TDS is 1,000 mg/L.

All other Site wells have been below the NMWQCC standard for chloride and for TDS during the monitoring events that constituent was analyzed since initiation of monitoring in 2009. A chloride concentration map depicting chloride concentrations for the 2021 sampling event is included as Figure 4. A summary of the historical groundwater laboratory analytical results is presented in

Table 2. The corresponding laboratory analytical report for the April 2021 monitoring event is included as Appendix A.

3. Conclusions

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

- Groundwater collected from three Site wells (MW-2, MW-3, and MW-4) have consistently been below laboratory detection limits or below NMWQCC standard for all constituents of concern since sampling was initiated.
- Chloride and TDS concentrations in samples collected from MW-1 have consistently exceeded the NMWQCC standard but are now at a level just sightly over standards.
- Historical concentrations of BTEX constituents were consistently below laboratory detection limits in all wells and below NMWQCC standards.
- Chloride concentrations in MW-1 indicate a general decreasing trend.

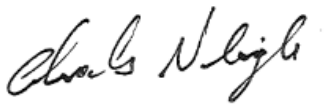
4. Recommendations

Due to the above conclusions, GHD recommends:

- The Boyd Compressor Station be granted no further action status based on Site wells being below NMWQC standards for all monitored constituents except for MW-1 with concentrations of chloride and TDS slightly over standards. BTEX constituents were never present in groundwater at the site based on analytical data form initiation of sampling in 2009 to discontinuation of BTEX monitoring in 2015.

All of Which is Respectfully Submitted,

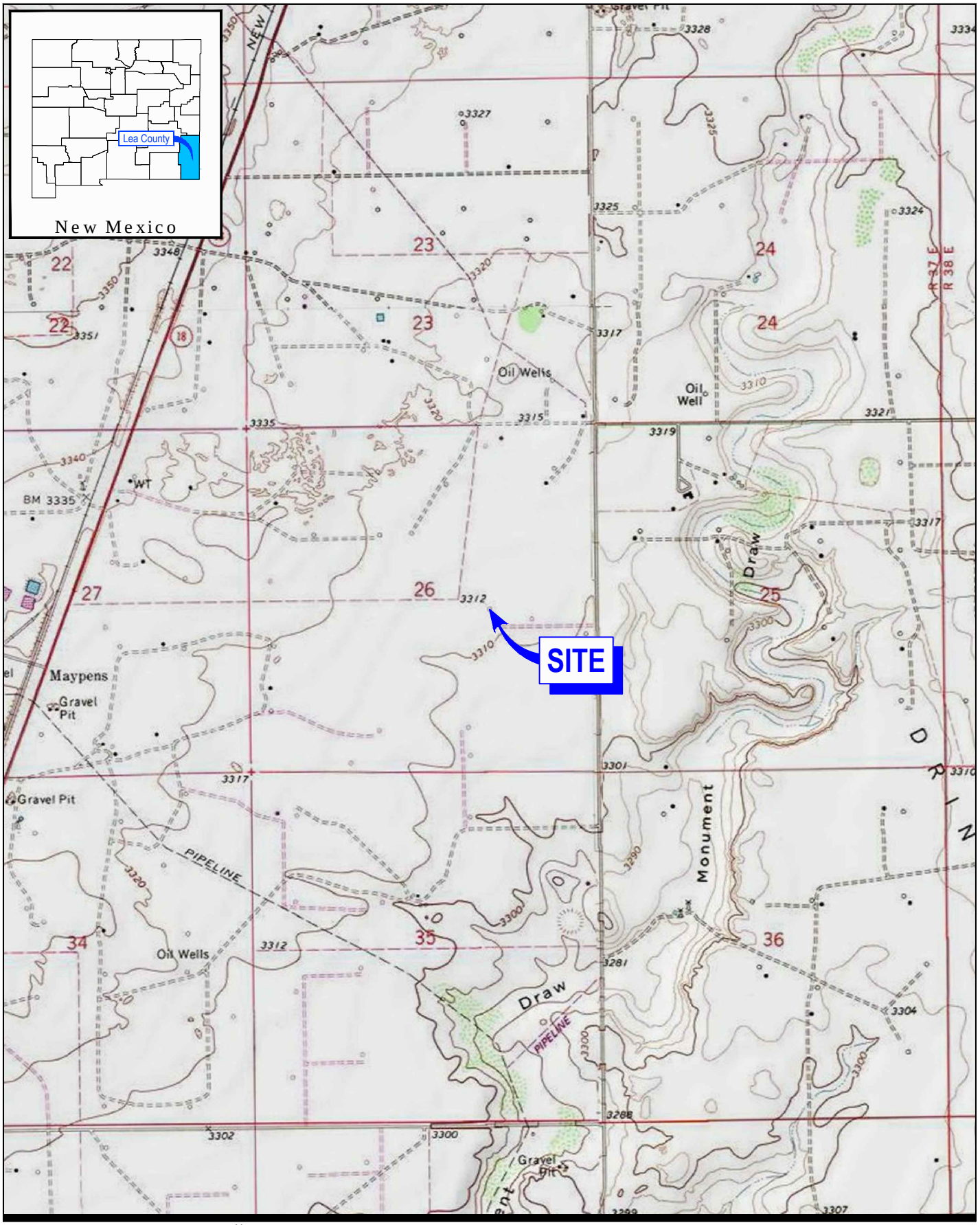
GHD



Charles Neligh
Project Scientist

Christine Mathews
Project Manager

Figures



0 1000 2000 ft

N

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

GHD

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
BOYD COMPRESSOR STATION

Project No. **12574720**
Date **March 2022**

SITE LOCATION MAP

FIGURE 1

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Plot Date: 01 March 2022 3:28 PM

Source: USGS 7.5 Minute Quad "Rattlesnake Canyon and Eunice SE, New Mexico"
Lat/Long: 32.362468° North, 103.130500° West

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
BOYD COMPRESSOR STATION

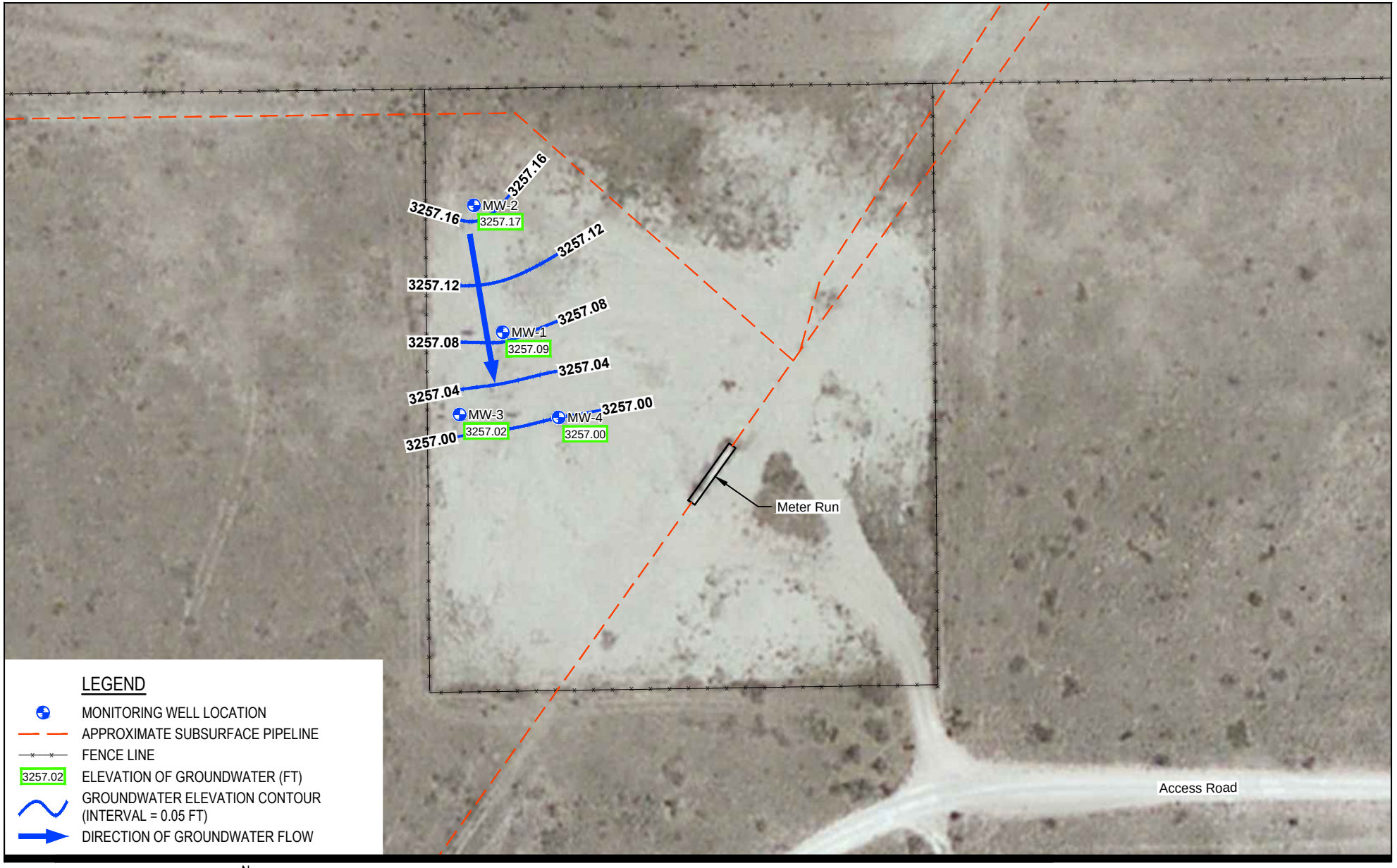
Project No. **12574720**
Date **March 2022**

SITE MAP

FIGURE 2

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\662\12574720\Digital_Design\ACAD\Figures\RPT001\12574720-GHD-0000-EN-RPT-0101_DL-001.dwg

Source: USDA FSA Imagery, May 10, 2014
Lat/Long: 32.362468° North, 103.130500° West



ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
BOYD COMPRESSOR STATION

Project No. **12574720**
Date **March 2022**

GROUNDWATER GRADIENT MAP - APRIL 2021

FIGURE 3

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\12574720\Digital_Design\ACAD\Figures\RPT001\12574720-GHD-0000-EN-RPT-0101_DL-001.dwg

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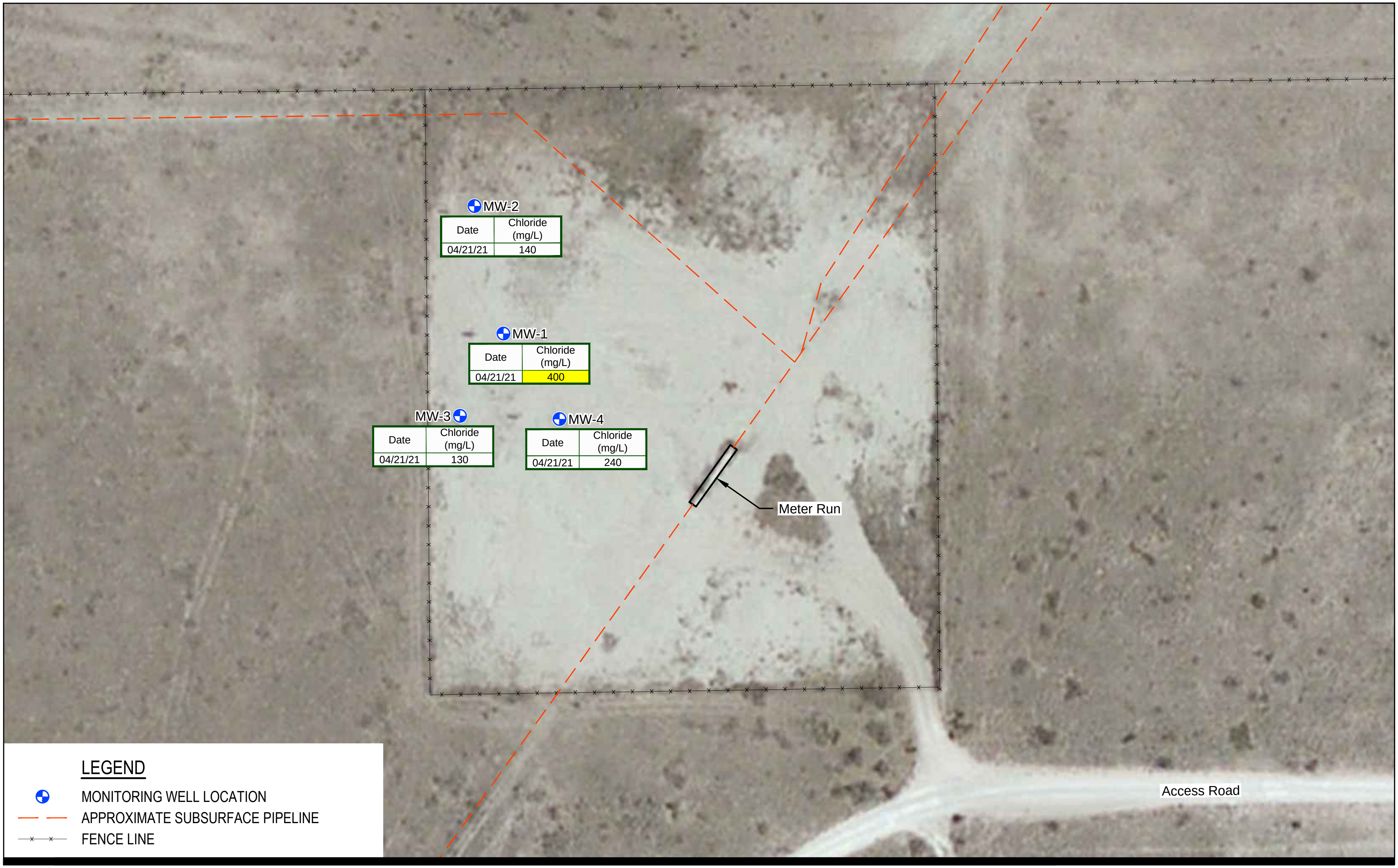


0 40 80 ft

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

N

NOTES:

1. RESULTS IN MILLIGRAMS PER LITER (MG/L).
2. YELLOW SHADED CELLS INDICATE EXCEEDANCE OF THE NMWQCC STANDARD OF 250 (MG/L).

GHD

ETC TEXAS PIPELINE, LTD.
LEA COUNTY, NEW MEXICO
BOYD COMPRESSOR STATION

2021 CHLORIDE CONCENTRATIONS IN GROUNDWATER

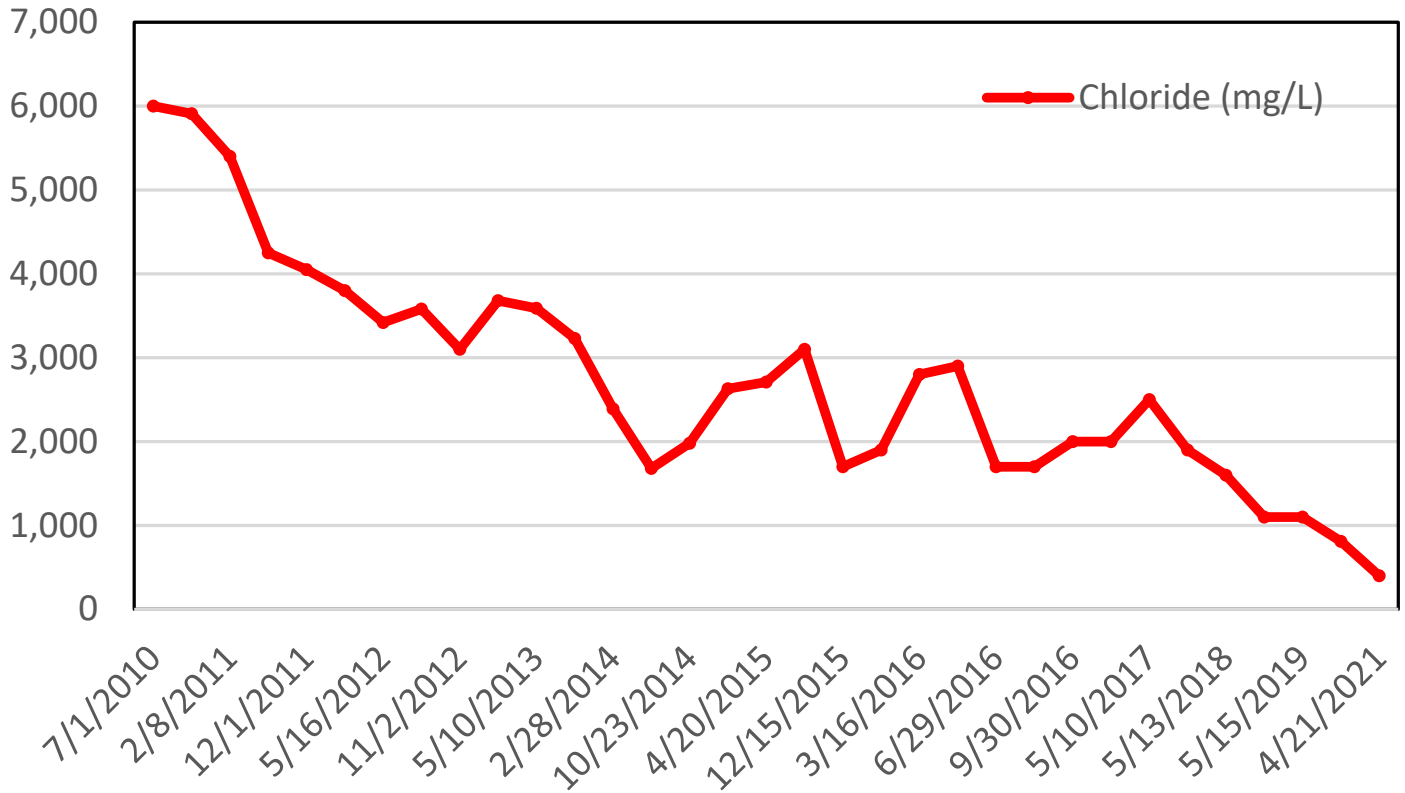
Project No. **12574720**
Date **March 2022**

FIGURE 4

Filename: \\ghdnet\ghd\US\Albuquerque\Projects\562\12574720\Digital_Design\ACAD\Figures\RPT001\12574720-GHD-0000-EN-RPT-0101_DL-001.dwg

Source: USDA FSA Imagery, May 10, 2014
Lat/Long: 32.362468° North,

Figure 5
Chloride Concentration in MW-1 vs. Time



Tables

Table 1
Monitoring Well Specifications and Groundwater Elevations
ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Top of Casing (TOC) Elevation	Total Depth (ft below TOC)	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-1	3,316.67	69.35	6/26/2009	-	58.95	-	3,257.72
			3/25/2010	-	59.07	-	3,257.60
			6/28/2010	-	59.32	-	3,257.35
			10/29/2010	-	59.12	-	3,257.55
			2/8/2011	-	59.17	-	3,257.50
			9/28/2011	-	59.36	-	3,257.31
			12/1/2011	-	59.36	-	3,257.31
			2/9/2012	-	59.45	-	3,257.22
			5/16/2012	-	58.00	-	3,258.67
			8/31/2012	-	58.01	-	3,258.66
			11/2/2012	-	59.50	-	3,257.17
			2/7/2013	-	59.67	-	3,257.00
			5/10/2013	-	59.48	-	3,257.19
			9/4/2013	-	59.71	-	3,256.96
			8/12/2014	-	59.75	-	3,256.92
			10/23/2014	-	59.23	-	3,257.44
			1/23/2015	-	59.11	-	3,257.56
			4/20/2015	-	59.00	-	3,257.67
			9/30/2015	-	58.96	-	3,257.71
			12/15/2015	-	58.86	-	3,257.81
			3/16/2016	-	58.76	-	3,257.91
			6/29/2016	-	58.81	-	3,257.86
			9/30/2016	-	58.88	-	3,257.79
			11/30/2016	-	58.81	-	3,257.86
			5/10/2017	-	58.84	-	3,257.83
			11/16/2017	-	58.85	-	3,257.82
			5/13/2018	-	58.90	-	3,257.77
			11/7/2018	-	59.02	-	3,257.65
			5/15/2019	-	59.06	-	3,257.61
			7/15/2020	-	59.30	-	3,257.37
			4/21/2021	-	59.58	-	3,257.09

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Lea County, New Mexico

Well Number	Top of Casing (TOC) Elevation	Total Depth (ft below TOC)	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-2	3,317.02	69.64	6/26/2009	-	59.16	-	3,257.86
			3/25/2010	-	59.32	-	3257.70
			6/28/2010	-	59.97	-	3,257.05
			10/29/2010	-	57.36	-	3,259.66
			2/8/2011	-	59.4	-	3,257.62
			9/28/2011	-	59.57	-	3,257.45
			12/1/2011	-	60.65	-	3,256.37
			2/9/2012	-	59.65	-	3,257.37
			5/16/2012	-	59.65	-	3,257.37
			8/31/2012	-	59.60	-	3,257.42
			11/2/2012	-	59.75	-	3,257.27
			2/7/2013	-	59.84	-	3,257.18
			5/10/2013	-	59.86	-	3,257.16
			9/4/2013	-	59.00	-	3,258.02
			8/12/2014	-	60.02	-	3,257.00
			10/23/2014	-	59.47	-	3,257.55
			1/23/2015	-	59.41	-	3,257.61
			4/20/2015	-	59.27	-	3,257.75
			9/30/2015	-	59.21	-	3,257.81
			12/15/2015	-	59.12	-	3,257.90
			3/16/2016	-	59.02	-	3,258.00
			6/29/2016	-	59.07	-	3,257.95
			9/30/2016	-	59.14	-	3,257.88
			11/30/2016	-	59.06	-	3,257.96
			5/10/2017	-	59.12	-	3,257.90
			11/16/2017	-	59.14	-	3,257.88
			5/13/2018	-	59.12	-	3,257.90
			11/7/2018	-	59.31	-	3,257.71
			5/15/2019	-	59.33	-	3,257.69
			7/15/2020	-	59.58	-	3,257.44
			4/21/2021	-	59.85	-	3,257.17

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ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Top of Casing (TOC) Elevation	Total Depth (ft below TOC)	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-3	3,317.52	69.50	6/26/2009	-	59.16	-	3,258.36
			3/25/2010	-	59.92	-	3,257.60
			6/28/2010	-	59.97	-	3,257.55
			10/29/2010	-	60.16	-	3,257.36
			2/8/2011	-	59.40	-	3,258.12
			9/28/2011	-	60.23	-	3,257.29
			12/1/2011	-	65.20	-	3,252.32
			2/9/2012	-	60.30	-	3,257.22
			5/16/2012	-	60.30	-	3,257.22
			8/31/2012	-	60.30	-	3,257.22
			11/2/2012	-	59.97	-	3,257.55
			2/7/2013	-	60.55	-	3,256.97
			5/10/2013	-	60.48	-	3,257.04
			9/4/2013	-	60.80	-	3,256.72
			8/12/2014	-	60.66	-	3,256.86
			10/23/2014	-	60.13	-	3,257.39
			1/23/2015	-	60.03	-	3,257.49
			4/20/2015	-	59.88	-	3,257.64
			9/30/2015	-	59.84	-	3,257.68
			12/15/2015	-	59.74	-	3,257.78
			3/16/2016	-	59.64	-	3,257.88
			6/29/2016	-	59.69	-	3,257.83
			9/30/2016	-	59.76	-	3,257.76
			11/30/2016	-	59.68	-	3,257.84
			5/10/2017	-	59.73	-	3,257.79
			11/16/2017	-	59.75	-	3,257.77
			5/13/2018	-	59.77	-	3,257.75
			11/7/2018	-	59.10	-	3,258.42
			5/15/2019	-	59.99	-	3,257.53
			7/15/2020	-	60.20	-	3,257.32
			4/21/2021	-	60.50	-	3,257.02

Table 1
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ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Top of Casing (TOC) Elevation	Total Depth (ft below TOC)	Date Measured	Depth to LNAPL (ft below TOC)	Depth to Water (ft below TOC)	LNAPL Thickness (ft)	Groundwater Elevation (ft AMSL)
MW-4	3,317.06	68.95	6/26/2009	-	59.36	-	3,257.70
			3/25/2010	-	59.50	-	3,257.56
			6/28/2010	-	59.12	-	3,257.94
			10/29/2010	-	59.58	-	3,257.48
			2/8/2011	-	59.61	-	3,257.45
			9/28/2011	-	59.78	-	3,257.28
			12/1/2011	-	59.25	-	3,257.81
			2/9/2012	-	59.85	-	3,257.21
			5/16/2012	-	59.85	-	3,257.21
			8/31/2012	-	59.80	-	3,257.26
			11/2/2012	-	59.80	-	3,257.26
			2/7/2013	-	60.10	-	3,256.96
			5/10/2013	-	60.63	-	3,256.43
			9/4/2013	-	60.21	-	3,256.85
			8/12/2014	-	60.22	-	3,256.84
			10/23/2014	-	59.69	-	3,257.37
			1/23/2015	-	59.59	-	3,257.47
			4/20/2015	-	59.43	-	3,257.63
			9/30/2015	-	59.39	-	3,257.67
			12/15/2015	-	59.29	-	3,257.77
			3/16/2016	-	59.20	-	3,257.86
			6/29/2016	-	59.26	-	3,257.80
			9/30/2016	-	59.32	-	3,257.74
			11/30/2016	-	59.23	-	3,257.83
			5/10/2017	-	59.29	-	3,257.77
			11/16/2017	-	59.32	-	3,257.74
			5/13/2018	-	59.34	-	3,257.72
			11/7/2018	-	59.52	-	3,257.54
			5/15/2019	-	59.54	-	3,257.52
			7/15/2020	-	59.77	-	3,257.29
			4/21/2021	-	60.06	-	3,257.00

Notes:
ft = feet LNAPL = Light non-aqueous phase liquid AMSL = Above mean sea level

Table 2
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Sample Type	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylene (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Groundwater Standards			**0.005**	**1.0**	**0.7**	**0.62**	**250**	**1000**
MW-1	Original	1/15/2009	<0.0010	<0.0010	<0.0010	<0.0010	**2,610**	-
		3/25/2010	0.0015	0.0019	<0.0010	<0.0010	-	-
		7/1/2010	<0.0010	<0.0020	<0.0010	<0.0010	**6,000**	-
		10/29/2010	<0.0010	<0.0020	<0.0010	<0.0010	**5,910**	-
		2/8/2011	<0.0010	<0.0020	<0.0010	<0.0010	**5,400**	-
		9/28/2011	<0.0050	<0.0050	<0.0050	<0.010	**4,250**	-
		12/1/2011	<0.0010	<0.0020	<0.0010	<0.0020	**4,050**	-
		2/9/2012	<0.0010	<0.0020	<0.0010	<0.0020	**3,800**	-
		5/16/2012	<0.0010	<0.0020	<0.0010	<0.0020	**3,420**	-
		8/31/2012	<0.0010	<0.0020	<0.0010	<0.0010	**3,580**	-
		11/2/2012	<0.0010	<0.0020	<0.0010	<0.0010	**3,100**	-
		2/7/2013	<0.00100	<0.00200	<0.00100	<0.00200	**3680**	-
		5/10/2013	<0.00100	<0.00200	<0.00100	<0.00200	**3590**	-
		9/4/2013	<0.00100	<0.00200	<0.00100	<0.00200	**3230**	-
		2/28/2014	<0.00100	<0.00200	<0.00100	<0.00100	**2390**	-
		8/12/2014	<0.00100	<0.00200	<0.00100	<0.00100	**1680**	-
		10/23/2014	<0.00100	<0.00100	<0.00100	<0.00100	**1980**	-
		1/23/2015	<0.00100	<0.00100	<0.00100	<0.00100	**2630**	-
		4/20/2015	<0.00100	<0.00100	<0.00100	<0.00100	**2710**	-
		9/30/2015	-	-	-	-	**3100**	**5860**
	Original	12/15/2015	-	-	-	-	**1700**	**3680**
	Duplicate	12/15/2015	-	-	-	-	**1900**	**3510**
	Original	3/16/2016	-	-	-	-	**2800**	**4940**
	Duplicate	3/16/2016	-	-	-	-	**2900**	**5290**
	Original	6/29/2016	-	-	-	-	**1700**	**3480**
	Duplicate	6/29/2016	-	-	-	-	**1700**	**3440**
		9/30/2016	-	-	-	-	**2000**	**3710**
		11/30/2016	-	-	-	-	**2000**	**3340**
		5/10/2017	-	-	-	-	**2500**	**4080**
		11/16/2017	-	-	-	-	**1900**	**3930**
		5/13/2018	-	-	-	-	**1600**	**3410**
		11/7/2018	-	-	-	-	**1100**	-
		5/15/2019	-	-	-	-	**1100**	**2320**
		7/15/020	-	-	-	-	**810**	**1990**
		4/21/2021	-	-	-	-	**400**	**1320**

Table 2
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Sample Type	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylene (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Groundwater Standards			**0.005**	**1.0**	**0.7**	**0.62**	**250**	**1000**
MW-2	Original	1/15/2009	<0.0010	<0.0010	<0.0010	<0.0010	145	-
		3/25/2010	<0.0010	0.0013	<0.0010	<0.0010	--	-
		7/1/2010	<0.0010	<0.0020	<0.0010	<0.0010	130	-
		10/29/2010	<0.0010	<0.0020	<0.0010	<0.0010	141	-
		2/8/2011	<0.0010	<0.0020	<0.0010	<0.0010	126	-
		9/28/2011	<0.0050	<0.0050	<0.0050	<0.010	148	-
		12/1/2011	<0.0010	<0.0020	<0.0010	<0.0020	126	-
		2/9/2012	<0.0010	<0.0020	<0.0010	<0.0020	129	-
		5/16/2012	<0.0010	<0.0020	<0.0010	<0.0020	135	-
		8/31/2012	<0.0010	<0.0020	<0.0010	<0.0010	132	-
		11/2/2012	<0.0010	<0.0020	<0.0010	<0.0010	164	-
		2/7/2013	<0.00100	<0.00200	<0.00100	<0.00200	169	-
		5/10/2013	<0.00100	<0.00200	<0.00100	<0.00200	144	-
		9/4/2013	<0.00100	<0.00200	<0.00100	<0.00200	155	-
		2/28/2014	<0.00100	<0.00200	<0.00100	<0.00100	161	-
		8/12/2014	<0.00100	<0.00200	<0.00100	<0.00100	139	-
		10/23/2014	<0.00100	<0.00100	<0.00100	<0.00100	149	-
		1/23/2015	<0.00100	<0.00100	<0.00100	<0.00100	127	-
		4/20/2015	<0.00100	<0.00100	<0.00100	<0.00100	193	-
	Duplicate	9/30/2015	-	-	-	-	180	-
		9/30/2015	-	-	-	-	190	835
		12/15/2015	-	-	-	-	170	880
		3/16/2016	-	-	-	-	180	870
		6/29/2016	-	-	-	-	170	866
		9/30/2016	-	-	-	-	170	857
		11/30/2016	-	-	-	-	180	947
		5/10/2017	-	-	-	-	160	765
		11/16/2017	-	-	-	-	160	865
		5/13/2018	-	-	-	-	130	860
		11/7/2018	-	-	-	-	120	-
		5/15/2019	-	-	-	-	110	756
		7/15/2020	-	-	-	-	88	688
		4/21/2021	-	-	-	-	140	744

Table 2
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Sample Type	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylene (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Groundwater Standards			**0.005**	**1.0**	**0.7**	**0.62**	**250**	**1000**
MW-3	Original	1/15/2009	<0.0010	<0.0010	<0.0010	<0.0010	150	-
		3/25/2010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
		7/1/2010	<0.0010	<0.0020	<0.0010	<0.0010	124	-
		10/29/2010	<0.0010	<0.0020	<0.0010	<0.0010	124	-
		2/8/2011	<0.0010	<0.0020	<0.0010	<0.0010	109	-
		9/28/2011	<0.0050	<0.0050	<0.0050	<0.010	138	-
		12/1/2011	<0.0010	<0.0020	<0.0010	<0.0020	115	-
		2/9/2012	<0.0010	<0.0020	<0.0010	<0.0020	107	-
		5/16/2012	<0.0010	<0.0020	<0.0010	<0.0020	110	-
		8/31/2012	<0.0010	<0.0020	<0.0010	<0.0010	109	-
		11/2/2012	<0.0010	<0.0020	<0.0010	<0.0010	126	-
		2/7/2013	<0.00100	<0.00200	<0.00100	<0.00200	127	-
		5/10/2013	<0.00100	<0.00200	<0.00100	<0.00200	100	-
		9/4/2013	<0.00100	<0.00200	<0.00100	<0.00200	115	-
		2/28/2014	<0.00100	<0.00200	<0.00100	<0.00100	117	-
		8/12/2014	<0.00100	<0.00200	<0.00100	<0.00100	105	-
		10/23/2014	<0.00100	<0.00100	<0.00100	<0.00100	97	-
		1/23/2015	<0.00100	<0.00100	<0.00100	<0.00100	81	-
		4/20/2015	<0.00100	<0.00100	<0.00100	<0.00100	88	-
		9/30/2015	-	-	-	-	170	740
		12/15/2015	-	-	-	-	160	852
		3/16/2016	-	-	-	-	110	740
		6/29/2016	-	-	-	-	120	810
		9/30/2016	-	-	-	-	130	772
		11/30/2016	-	-	-	-	200	980
		5/10/2017	-	-	-	-	170	765
		11/16/2017	-	-	-	-	150	824
		5/13/2018	-	-	-	-	170	888
		11/7/2018	-	-	-	-	140	-
	Duplicate	5/15/2019	-	-	-	-	140	772
		5/15/2019	-	-	-	-	120	775
		7/15/2020	-	-	-	-	130	840
		4/21/2021	-	-	-	-	130	752

Table 2
Groundwater Analytical Results Summary
ETC Texas Pipeline, Ltd.
Boyd Compressor Station
Lea County, New Mexico

Well Number	Sample Type	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylene (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Groundwater Standards			**0.005**	**1.0**	**0.7**	**0.62**	**250**	**1000**
MW-4		1/15/2009	<0.0010	43600	<0.0010	<0.0010	208	-
		3/25/2010	<0.0010	<0.0010	<0.0010	<0.0010	-	-
		7/1/2010	<0.0010	<0.0020	<0.0010	<0.0010	187	-
		10/29/2010	<0.0010	<0.0020	<0.0010	<0.0010	196	-
		2/8/2011	<0.0010	<0.0020	<0.0010	<0.0010	180	-
		9/28/2011	<0.0050	<0.0050	<0.0050	<0.010	221	-
		12/1/2011	<0.0010	<0.0020	<0.0010	<0.0020	206	-
		2/9/2012	<0.0010	<0.0020	<0.0010	<0.0020	214	-
		5/16/2012	<0.0010	<0.0020	<0.0010	<0.0020	195	-
		8/31/2012	<0.0010	<0.0020	<0.0010	<0.0010	216	-
		11/2/2012	<0.0010	<0.0020	<0.0010	<0.0010	216	-
		2/7/2013	<0.00100	<0.00200	<0.00100	<0.00200	227	-
		5/10/2013	<0.00100	<0.00200	<0.00100	<0.00200	201	-
		9/4/2013	<0.00100	<0.00200	<0.00100	<0.00200	195	-
		2/28/2014	<0.00100	<0.00200	<0.00100	<0.00100	199	-
		8/12/2014	<0.00100	<0.00200	<0.00100	<0.00100	203	-
		10/23/2014	<0.00100	<0.00100	<0.00100	<0.00100	192	-
		1/23/2015	<0.00100	<0.00100	<0.00100	<0.00100	197	-
		4/20/2015	<0.00100	<0.00100	<0.00100	<0.00100	215	-
		9/30/2015	-	-	-	-	200	930
		12/15/2015	-	-	-	-	210	980
		3/16/2016	-	-	-	-	210	956
		6/29/2016	-	-	-	-	200	950
	Original	9/30/2016	-	-	-	-	190	904
	Duplicate	9/30/2016	-	-	-	-	210	896
		11/30/2016	-	-	-	-	190	985
		5/10/2017	-	-	-	-	200	870
		11/16/2017	-	-	-	-	180	955
		5/13/2018	-	-	-	-	200	968
	Original	11/7/2018	-	-	-	-	190	-
	Duplicate	11/7/2018	-	-	-	-	190	-
		5/15/2019	-	-	-	-	210	942
	Original	7/15/2020	-	-	-	-	250	1060
	Duplicate	7/15/2020	-	-	-	-	280	1090
	Original	4/21/2021	-	-	-	-	240	1060
	Duplicate	4/21/2021	-	-	-	-	240	1030

Notes:
NMWQCC = New Mexico Water Quality Control Commission
TDS = Total dissovled solids
mg/L = milligrams per liter
Concentrations in **bold** exceed NMWQCC standards

Appendices

Appendix A

Laboratory 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

April 27, 2021

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

RE: Boyd OrderNo.: 2104973

Dear Christine Mathews:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/22/2021 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: **2104973**
Date Reported: **4/27/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 2104973
Project: Boyd

Lab ID: 2104973-001 **Collection Date:** 4/21/2021 9:30:00 AM
Client Sample ID: GW-11209237-042121-CN-MW-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MH**	
Chloride	400	50	*	mg/L	100	4/22/2021 11:32:37 AM	R76905
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JMT**	
Total Dissolved Solids	1320	20.0	*	mg/L	1	4/26/2021 3:09:00 PM	59597

Lab ID: 2104973-002 **Collection Date:** 4/21/2021 10:30:00 AM
Client Sample ID: GW-11209237-042121-CN-MW-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MH**	
Chloride	140	5.0		mg/L	10	4/22/2021 11:45:29 AM	R76905
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JMT**	
Total Dissolved Solids	744	40.0	*D	mg/L	1	4/26/2021 3:09:00 PM	59597

Lab ID: 2104973-003 **Collection Date:** 4/21/2021 11:30:00 AM
Client Sample ID: GW-11209237-042121-CN-MW-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MH**	
Chloride	130	5.0		mg/L	10	4/22/2021 1:16:10 PM	R76905
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JMT**	
Total Dissolved Solids	752	40.0	*D	mg/L	1	4/26/2021 3:09:00 PM	59597

Lab ID: 2104973-004 **Collection Date:** 4/21/2021 12:30:00 PM
Client Sample ID: GW-11209237-042121-CN-MW-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MH**	
Chloride	240	50		mg/L	100	4/22/2021 1:54:21 PM	R76905
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JMT**	
Total Dissolved Solids	1060	40.0	*D	mg/L	1	4/26/2021 3:09:00 PM	59597

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: **2104973**
Date Reported: **4/27/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD **Lab Order:** 2104973
Project: Boyd

Lab ID: 2104973-005 **Collection Date:** 4/21/2021
Client Sample ID: GW-11209237-042121-CN-DUP **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MH**	
Chloride	240	50		mg/L	100	4/22/2021 2:20:07 PM	R76905
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **JMT**	
Total Dissolved Solids	1030	40.0	*D	mg/L	1	4/26/2021 3:09:00 PM	59597

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#: **2104973**

27-Apr-21

Client: GHD

Project: Boyd

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R76905**	RunNo: **76905**
Prep Date:	Analysis Date: **4/22/2021**	SeqNo: **2725480** 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: **R76905**	RunNo: **76905**
Prep Date:	Analysis Date: **4/22/2021**	SeqNo: **2725488** 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	93.3	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#: **2104973**

27-Apr-21

Client: GHD

Project: Boyd

Sample ID: **MB-59597**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **59597**	RunNo: **76953**
Prep Date: **4/23/2021**	Analysis Date: **4/26/2021**	SeqNo: **2727341** 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-59597**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **59597**	RunNo: **76953**
Prep Date: **4/23/2021**	Analysis Date: **4/26/2021**	SeqNo: **2727342** Units: **mg/L**

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

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: **2104973** RcptNo: 1

Received By: **Cheyenne Cason** **4/22/2021 7:55:00 AM**

Completed By: **Cheyenne Cason** **4/22/2021 8:14:19 AM**

Reviewed By: JR 4/22/21

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 ☐	

10. IO

# of preserved bottles checked for pH: 4/22/21 (<2 or >12 unless noted)

Adjusted?

Checked by:

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	2.2	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: Boyd

Project #: 11209237

Project Manager: Christine Mathews

Sampler: CN

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.3 - 0.1 = 2.2 (°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. 2104973	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)	Chloride 300.0	TDS 2540				
4-21-21	0930	W	GW-11209237-042121-CN-MW-1	1 500mL		001											X	X				
4-21-21	1030		GW-11209237-042121-CN-MW-2			002											X	X				
4-21-21	1130		GW-11209237-042121-CN-MW-3			003											X	X				
4-21-21	1230		GW-11209237-042121-CN-MW-4			004											X	X				
4-21-21	—	↓	GW-11209237-042121-CN-DUP	↓		005											X	X				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4-21-21	1430				4/21/21	1430
4/21/21	1900				Date	Time
			CH	CCW	4/22/21	0755

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 109083

CONDITIONS

Operator: ETC Texas Pipeline, Ltd. 8111 Westchester Drive Dallas, TX 75225	OGRID: 371183
	Action Number: 109083
	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 for the Boyd Compressor Station has been accepted for the record with contents unsatisfactory for completion and termination: 1. In order to meet the requirements for abatement completion at the site, all constituents of concern, namely chloride, must demonstrate levels below the allowable concentrations in the NM WQCC human health standards for eight consecutive quarters, or an alternate lesser amount of samples, approved by the OCD. 2. An Abatement Completion report must be submitted to OCD with all the met requirements as per 19.15.30.9 of the NMAC including a one time sampling work plan of the vadose zone as per 19.15.30.9 paragraph D of the NMAC. 3. Continue to sample on a quarterly basis until chloride is below the allowable concentrations in groundwater or propose a remediation method to OCD to mitigate chlorides in groundwater at the site. 4. Submit the 2022, 2023 Annual Reports. Submit 2024 annual by April 1, 2025.	6/6/2024