REVIEWED
By Mike Buchanan at 11:24 am, May 22, 2024

ENSOLUM

March 24, 2023

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2022 Annual Groundwater Monitoring Report
McCoy Gas Com D 1E
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS2105634419

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2022 Annual Groundwater Monitoring Report* to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted at the McCoy Gas Com D 1E natural gas production site (Site) during 2022. The Site is located within Unit Letter E Section 28 within Township 30 north and Range 12 West, San Juan County, New Mexico (Figure 1). There are currently three monitoring wells onsite which are monitored quarterly for groundwater elevations. Only monitoring well MW-1R is sampled quarterly. This report presents the results of the 2022 monitoring events. Based on current and historical data gathered at the Site, Ensolum/Hilcorp is requesting closure of the Site and no further action for NMOCD Incident Number NCS2105634419.

Review of the 2022 Annual Groundwater Monitoring Report for McCoy Gas Com D 1E: Content is incomplete for closure
1. In order to meet abatement completion and closure of the incident, Hilcorp must submit an abatement and completion report for the site in accordance with 19.15.30.19 of the NMAC
2. With the closure and completion report there must be a work plan also submitted for sampling the vadose zone to demonstrate the release at the site has met closure criteria and the abatement standards, as per 19.15.30.9 paragraph D of the NMAC.
3. Please upload the approved Groundwater Monitoring Plan into the incident/well file via online permitting site.

SITE BACKGROUND

Comprehensive Site background history, work plans, and reports prepared for the Site are available on the NMOCD database. In December of 2017, Hilcorp acquired the Site from XTO Energy, Inc. and continued to perform semi-annual monitoring of groundwater elevations of all monitoring wells and semi-annual sampling of MW-1R. Quarterly monitoring of groundwater elevations of all wells and quarterly sampling of MW-1R was approved by the NMOCD and commenced in October 2021. Summaries of groundwater elevation data and laboratory analytical results from historical and current groundwater monitoring events are presented in Table 1 and Table 2, respectively.

SITE GROUNDWATER CLEANUP STANDARDS

The NMOCD requires groundwater-quality standards be met as presented by the New Mexico Water Quality Control Commission (NMWQCC) and listed in Title 20, Chapter 6, Part 2, Section 3103 (20.6.2.3103) of the New Mexico Administrative Code (NMAC). The following standards are presented for the constituents of concern (COCs) at the Site in micrograms per liter (µg/L).

- Benzene: 5.0 µg/L
- Toluene: 1,000 µg/L

- Ethylbenzene: 700 µg/L
- Total Xylenes: 620 µg/L

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater-level measurements were collected in February, April, July, and October 2022 at all wells, and samples were collected from well MW-1R during these monitoring events. Static groundwater-level monitoring included recording depth-to-groundwater using an oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement to prevent cross-contamination. Measured depths-to-groundwater and calculated groundwater elevations are presented in Table 1. The inferred groundwater flow direction was to the north-northeast during the 2022 sampling events, as indicated on Figures 2, 3, 4, and 5.

GROUNDWATER SAMPLING

Groundwater from monitoring well MW-1R was purged and sampled using a disposable bailer. Purging was accomplished by removing stagnant groundwater from the monitoring well prior to collecting a sample. Field measurements of groundwater quality parameters, including temperature, pH, electrical conductivity, and total dissolved solids were collected during the purging process.

Following well purging, groundwater samples were placed directly into laboratory-provided containers and labeled with the date and time of collection, well designation, project name, sample collector's name, and parameters to be analyzed. Containers were immediately sealed and packed on ice to preserve samples. Samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United State Environmental Protection Agency (EPA) Method 8260B. Proper chain-of-custody procedures were followed documenting the date and time sampled, sample number, type of sample, sample collector's name, preservative used, analyses required, and sample collector's signature.

GROUNDWATER ANALYTICAL RESULTS

During the quarterly sampling events in 2022, no BTEX constituents were detected in groundwater from well MW-1R at concentrations exceeding the NMWQCC standards. Analytical results are summarized in Table 2 and depicted on Figures 2 through 5, with complete laboratory analytical reports attached as Appendix A.

CONCLUSIONS AND RECOMMENDATIONS

BTEX concentrations in groundwater have not been detected above NMWQCC standards in well MW-1R for five consecutive quarters and eleven consecutive sampling events (since December 2018). In addition, benzene and toluene have been below laboratory reporting limits for the past six sampling events. Based on current and historical data gathered at the Site, petroleum impacts at the Site have been successfully remediated to below applicable closure criteria/standards. As such, Ensolum/Hilcorp requests closure of the Site and no further action for NMOCD Incident Number NCS2105634419.

Ensolum appreciates the opportunity to provide these environmental services to Hilcorp. Please contact either of the undersigned with any questions.

Sincerely,

Ensolum, LLC

Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com

Daniel R. Moir, PG
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

Figure 1	Site Location Map
Figure 2	Groundwater Elevation and Analytical Results (February 2022)
Figure 3	Groundwater Elevation and Analytical Results (April 2022)
Figure 4	Groundwater Elevation and Analytical Results (July 2022)
Figure 5	Groundwater Elevation and Analytical Results (October 2022)
Table 1	Groundwater Elevation Summary
Table 2	Groundwater Analytical Results
Appendix A	Laboratory Analytical Reports

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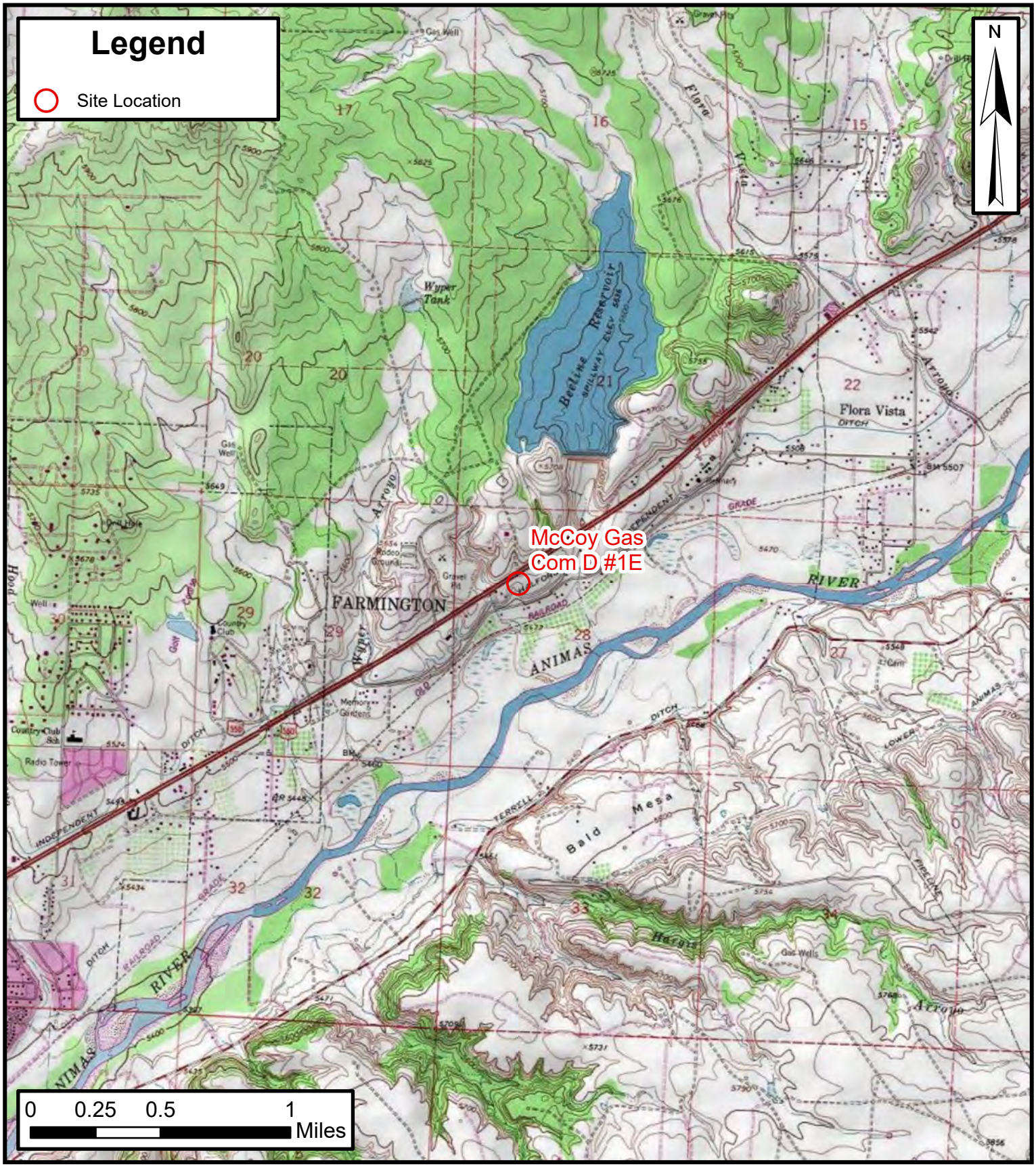
FIGURES



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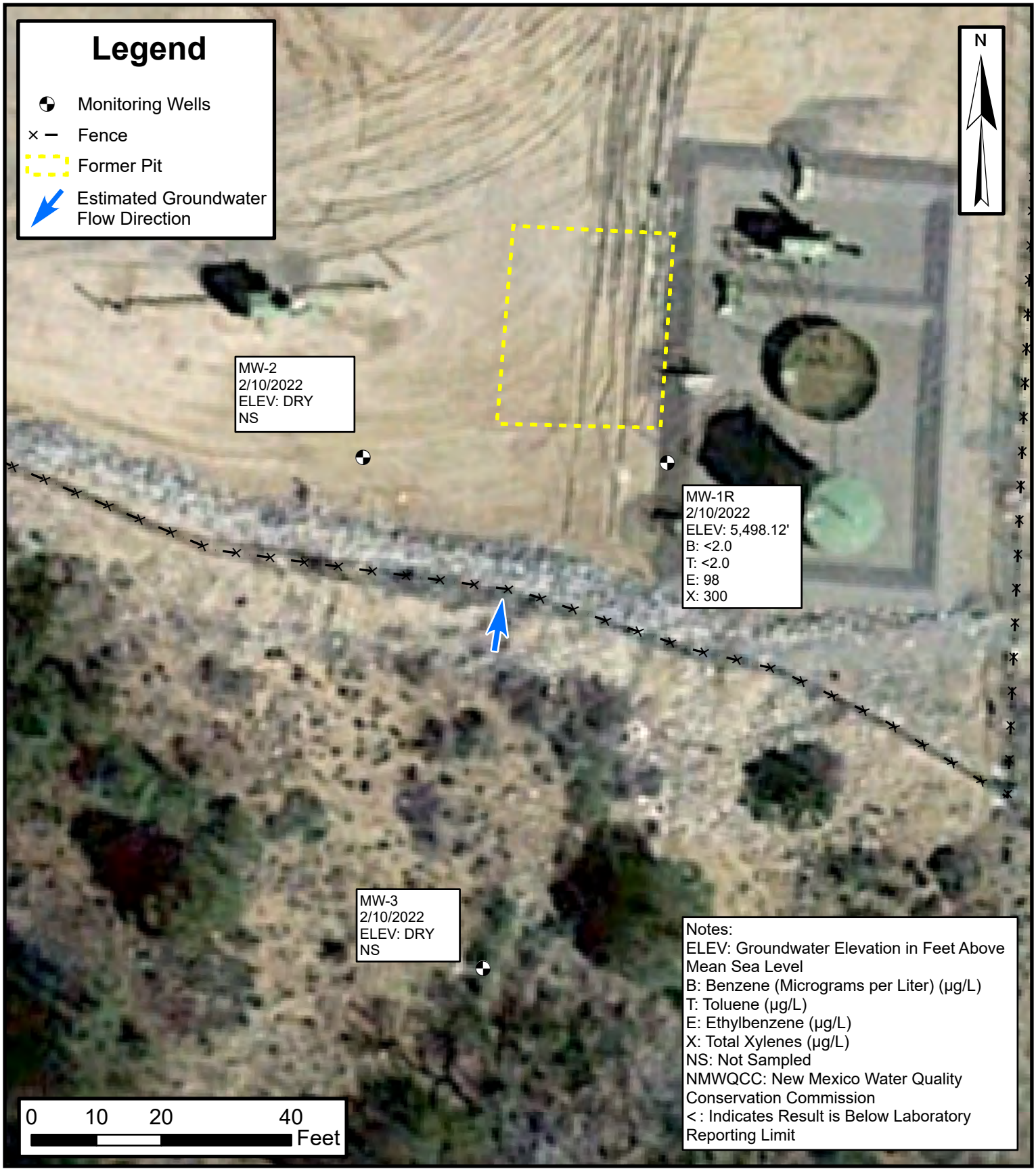
Environmental, Engineering and Hydrogeologic Consultants

Site Location Map

McCoy Gas Com D #1E
Hilcorp Energy Company
36.78677, -108.10786
San Juan County, New Mexico

FIGURE
1

Sources: Environmental Systems Research Institute (ESRI), National Geographic Society, i-cubed



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Groundwater Elevation and Analytical Results (February 2022)

McCoy Gas Com D #1E
Hilcorp Energy Company
36.78677, -108.10786
San Juan County, New Mexico

FIGURE
2

Sources: Google Earth

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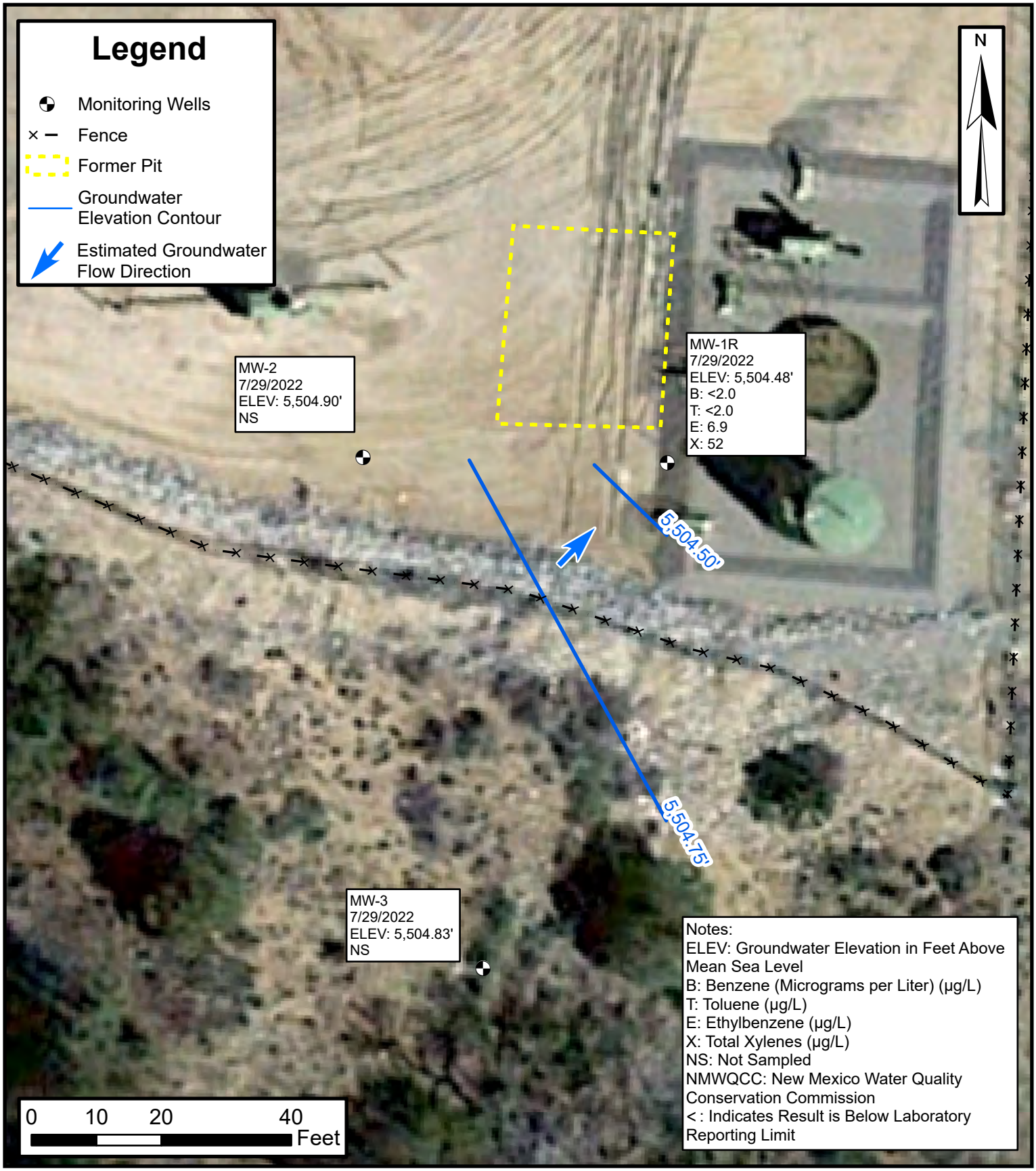
Environmental, Engineering and Hydrogeologic Consultants

Groundwater Elevation and Analytical Results (April 2022)

McCoy Gas Com D #1E
Hilcorp Energy Company
36.78677, -108.10786
San Juan County, New Mexico

FIGURE
3

Sources: Google Earth



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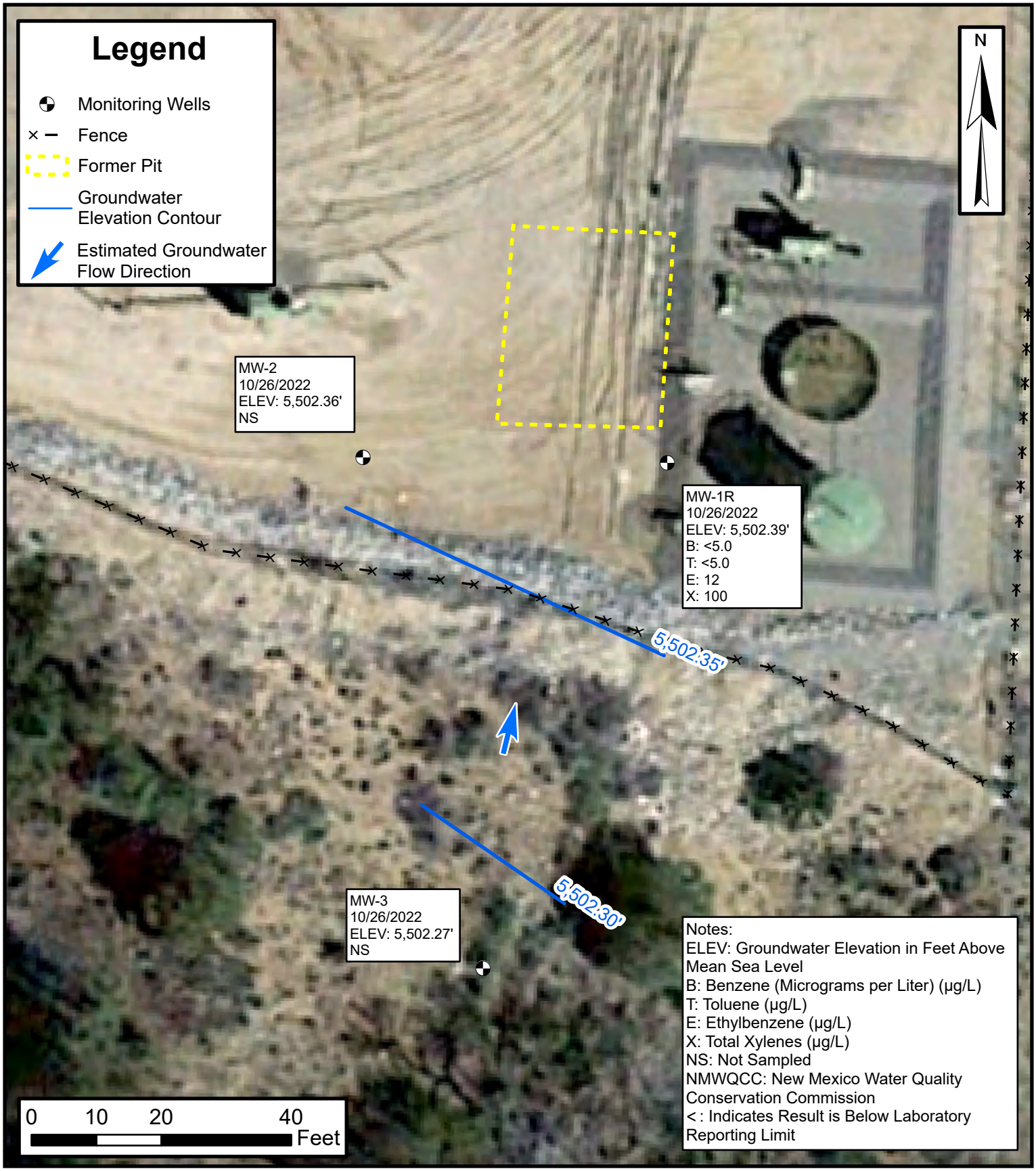
Groundwater Elevation and Analytical Results (July 2022)

McCoy Gas Com D #1E
Hilcorp Energy Company
36.78677, -108.10786
San Juan County, New Mexico

FIGURE
4

Sources: Google Earth



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Groundwater Elevation and Analytical Results (October 2022)

McCoy Gas Com D #1E
Hilcorp Energy Company
36.78677, -108.10786
San Juan County, New Mexico

FIGURE
5

Sources: Google Earth

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TABLES

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TABLE 1
GROUNDWATER ELEVATIONS
McCoy Gas Com D #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet AMSL)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-1	5,535.13	10/16/2006	32.86	--	--	5,502.27
		5/16/2007	30.69	--	--	5,504.44
		7/23/2007	30.57	--	--	5,504.56
		9/27/2007	32.01	--	--	5,503.12
		11/27/2007	34.60	--	--	5,500.53
		5/13/2008	31.97	--	--	5,503.16
		1/21/2009	36.88	--	--	5,498.25
		5/26/2009	30.68	--	--	5,504.45
		5/25/2010	30.13	--	--	5,505.00
		8/12/2010	30.87	--	--	5,504.26
		11/17/2010	33.96	--	--	5,501.17
		2/14/2011	37.27	--	--	5,497.86
MW-1R	5,533.58	5/17/2011	29.31	--	--	5,504.27
		8/9/2011	29.04	--	--	5,504.54
		11/9/2011	31.51	--	--	5,502.07
		3/8/2012	37.41	37.07	0.34	5,496.44
		6/14/2012	28.39	28.29	0.10	5,505.27
		9/12/2012	29.89	--	--	5,503.69
		12/21/2012	34.22	34.19	0.03	5,499.38
		3/14/2013	38.31	--	--	5,495.27
		6/17/2013	28.05	--	--	5,505.53
		9/11/2013	29.11	--	--	5,504.47
		12/16/2013	34.61	--	--	5,498.97
		3/12/2014	35.78	--	--	5,497.80
		6/11/2014	28.05	--	--	5,505.53
		9/22/2014	29.25	--	--	5,504.33
		12/9/2014	34.61	--	--	5,498.97
		3/12/2015	35.55	--	--	5,498.03
		6/11/2015	28.35	--	--	5,505.23
		9/21/2015	29.20	--	--	5,504.38
		12/21/2015	34.20	--	--	5,499.38
		6/20/2016	29.20	--	--	5,504.38
		12/14/2016	34.22	--	--	5,499.36
		6/26/2017	28.95	--	--	5,504.63
		12/12/2017	34.03	--	--	5,499.55
		6/28/2018	28.42	--	--	5,505.16
		12/10/2018	33.67	--	--	5,499.91
		6/20/2019	29.59	--	--	5,503.99
		12/9/2019	34.12	--	--	5,499.46
		3/18/2020	38.79	--	--	5,494.79
		6/22/2020	28.78	--	--	5,504.80
		1/26/2021	35.33	--	--	5,498.25
		6/22/2021	28.69	--	--	5,504.89
		10/27/2021	31.22	--	--	5,502.36
		2/10/2022	35.46	--	--	5,498.12
		4/28/2022	33.78	--	--	5,499.80
		7/29/2022	29.10	--	--	5,504.48
		10/26/2022	31.19	--	--	5,502.39

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TABLE 1
GROUNDWATER ELEVATIONS
McCoy Gas Com D #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet AMSL)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-2	5,535.68	5/17/2007	30.56	--	--	5,505.12
		7/23/2007	31.98	--	--	5,503.70
		9/27/2007	32.44	--	--	5,503.24
		11/27/2007	35.29	--	--	5,500.39
		5/13/2008	31.98	--	--	5,503.70
		5/26/2009	36.46	--	--	5,499.22
		5/25/2010	29.88	--	--	5,505.80
		8/12/2010	31.30	--	--	5,504.38
		11/17/2010	34.61	--	--	5,501.07
		2/14/2011	Dry			
		5/17/2011	30.60	--	--	5,505.08
		8/9/2011	31.22	--	--	5,504.46
		11/9/2011	33.70	--	--	5,501.98
		3/8/2012	Dry			
		6/14/2012	29.66	--	--	5,506.02
		9/12/2012	31.77	--	--	5,503.91
		12/21/2012	36.44	--	--	5,499.24
		3/14/2013	Dry			
		6/17/2013	29.45	--	--	5,506.23
		9/11/2013	31.11	--	--	5,504.57
		12/16/2013	OBS			
		3/12/2014	OBS			
		6/11/2014	30.26	--	--	5,505.42
		9/22/2014	31.11	--	--	5,504.57
		12/9/2014	34.31	--	--	5,501.37
		3/12/2015	Dry			
		6/11/2015	30.00	--	--	5,505.68
		9/21/2015	30.96	--	--	5,504.72
		12/21/2015	Dry			
		6/20/2016	31.63	--	--	5,504.05
		12/14/2016	Dry			
		6/26/2017	30.63	--	--	5,505.05
		12/12/2017	Dry			
		6/28/2018	30.10	--	--	5,505.58
		12/10/2018	Dry			
		6/20/2019	31.57	--	--	5,504.11
		12/9/2019	Dry			
		3/18/2020	Dry/OBS @ 2.69			
		6/22/2020	30.37	--	--	5,505.31
		1/26/2021	Dry			
		6/22/2021	Dry/OBS @ 2.70			
		10/27/2021	33.35	--	--	5,502.33
		2/10/2022	Dry			
		4/28/2022	Dry			
		7/29/2022	30.78	--	--	5,504.90
		10/26/2022	33.32	--	--	5,502.36

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TABLE 1
GROUNDWATER ELEVATIONS
McCoy Gas Com D #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet AMSL)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-3	5,527.11	5/17/2007	21.55	--	--	5,505.56
		7/23/2007	30.65	--	--	5,496.46
		9/27/2007	24.02	--	--	5,503.09
		11/27/2007	28.94	--	--	5,498.17
		5/12/2008	22.55	--	--	5,504.56
		5/26/2009	21.37	--	--	5,505.74
		5/25/2010	20.99	--	--	5,506.12
		8/12/2010	23.03	--	--	5,504.08
		11/17/2010	26.85	--	--	5,500.26
		2/14/2011	Dry			
		5/17/2011	21.49	--	--	5,505.62
		8/9/2011	22.12	--	--	5,504.99
		11/9/2011	25.69	--	--	5,501.42
		3/8/2012	Dry			
		6/14/2012	20.97	--	--	5,506.14
		9/12/2012	23.31	--	--	5,503.80
		12/21/2012	30.61	--	--	5,496.50
		3/14/2013	Dry			
		6/17/2013	20.80	--	--	5,506.31
		9/11/2013	22.75	--	--	5,504.36
		12/16/2013	31.95	--	--	5,495.16
		3/12/2014	Dry			
		6/11/2014	20.93	--	--	5,506.18
		9/22/2014	22.62	--	--	5,504.49
		12/9/2014	29.24	--	--	5,497.87
		3/12/2015	32.60	--	--	5,494.51
		6/11/2015	21.30	--	--	5,505.81
		9/21/2015	22.13	--	--	5,504.98
		12/21/2015	30.65	--	--	5,496.46
		6/20/2016	22.33	--	--	5,504.78
		12/14/2016	31.10	--	--	5,496.01
		6/26/2017	21.97	--	--	5,505.14
		12/12/2017	30.44	--	--	5,496.67
		6/28/2018	21.63	--	--	5,505.48
		12/10/2018	29.65	--	--	5,497.46
		6/20/2019	22.92	--	--	5,504.19
		12/9/2019	30.79	--	--	5,496.32
		3/18/2020	Dry			
		6/22/2020	21.72	--	--	5,505.39
		1/26/2021	Dry			
		6/22/2021	21.76	--	--	5,505.35
		10/27/2021	24.87	--	--	5,502.24
		2/10/2022	Dry			
		4/28/2022	Dry			
		7/29/2022	22.28	--	--	5,504.83
		10/26/2022	24.84	--	--	5,502.27

Notes:

AMSL: above mean sea level

BTOC: below top of casing

NP: No Product

OBS: Obstruction in well

--: indicates no GWEL or PSH measured

Groundwater elevation is adjusted using a density correction factor of 0.8 when product is present

**: New Top of Casing Elevation; Casing Cut Off 1.55 Feet to Remove ORC Socks in May 2011, well designation changed to MW-1R*

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
McCoy Gas Com D #1E
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-1	10/16/2006	**22**	**2,500**	**2,700**	**19,000**
	5/16/2007	**30**	760	**1,700**	**24,000**
	5/13/2008	<10	640	540	**11,000**
	1/21/2009	<100	**1,200**	**1,100**	**12,000**
	5/26/2009	<10	620	640	**11,000**
	5/25/2010	**130**	160	430	**7,100**
	8/12/2010	**120**	<120	260	**6,700**
	11/17/2010	**360**	<2,500	**1,400**	**16,000**
	2/14/2011	**16**	1,000	**870**	**13,000**
MW-1R	5/17/2011	**300**	290	**850**	**13,000**
	8/9/2011	<5	53.6	19.3	**6,220**
	11/9/2011	**11**	<50	<5	**1,600**
	3/8/2012	--	--	--	--
	6/14/2012	**120**	110	**750**	**5,000**
	9/12/2012	**78**	<250	120	**4,600**
	12/21/2012	<25	<250	280	**7,400**
	3/21/2013	**98**	<250	<25.0	**7,100**
	6/17/2013	**66**	<250	94	**4,500**
	9/11/2013	**33**	<25	76	**840**
	12/13/2013	**52**	<100	160	**2,000**
	3/12/2014	**100**	<120	680	**8,800**
	6/11/2014	**36**	<25	430	**4,100**
	9/22/2014	2.7	<25	490	**1,400**
	12/9/2014	<9.5	<250	**840**	**8,500**
	3/12/2015	**96**	<25	**860**	**8,900**
	6/11/2015	<25	<250	610	**5,700**
	9/21/2015	**25**	<5	525	**4,340**
	12/21/2015	**93**	<250	**765**	**7,850**
	6/20/2016	**56**	<25.0	617	**5,370**
	12/14/2016	<25.0	<50.0	**961**	**9,700**
	6/26/2017	<12.5	<25.0	457	**3,890**
	12/3/2017	**108**	<100	**790**	**8,050**
	6/28/2018	<5.0	<5.0	430	**3,200**
	12/10/2018	<5.0	<5.0	**730**	**6,400**
	6/19/2019	<2.5	<2.5	4.3	<5.0
	12/9/2019	<1.0	<1.0	20	<2.0
	3/18/2020	<1.0	<1.0	130	110
	6/22/2020	<2.0	<2.0	21	12
	1/26/2021	2.13	<1.0	184	305
	6/22/2021	<1.0	<1.0	47	17
	10/27/2021	<2.0	<2.0	39	230
	2/10/2022	<2.0	<2.0	98	300
	4/28/2022	<2.0	<2.0	170	580
	7/29/2022	<2.0	<2.0	6.9	52
	10/26/2022	<5.0	<5.0	12.0	100
MW-2	5/17/2007	<1.0	<1.0	<1.0	3.10
	5/13/2008	<1.0	<1.0	<1.0	<2.0
	5/25/2010	<1.0	<1.0	<1.0	<2.0
MW-3	5/17/2007	<1.0	<1.0	<1.0	<2.0
	5/12/2008	<1.0	<1.0	<1.0	<2.0
	5/25/2010	<1.0	<1.0	<1.0	<2.0

Notes:

µg/L: micrograms per liter

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

<0.037: indicates result less than the stated laboratory reporting limit (RL)

*Concentrations in **bold** and highlighted exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code*

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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

February 17, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: McCoy Gas Com D1E OrderNo.: 2202582

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/11/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2202582**
Date Reported: **2/17/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW1R
Project: McCoy Gas Com D1E **Collection Date:** 2/10/2022 1:00:00 PM
Lab ID: 2202582-001 **Matrix:** AQUEOUS **Received Date:** 2/11/2022 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Toluene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Ethylbenzene	98	2.0		µg/L	2	2/16/2022 12:11:49 AM
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2,4-Trimethylbenzene	270	20		µg/L	20	2/16/2022 2:57:19 PM
1,3,5-Trimethylbenzene	14	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Naphthalene	8.4	4.0		µg/L	2	2/16/2022 12:11:49 AM
1-Methylnaphthalene	23	8.0		µg/L	2	2/16/2022 12:11:49 AM
2-Methylnaphthalene	ND	8.0		µg/L	2	2/16/2022 12:11:49 AM
Acetone	ND	20		µg/L	2	2/16/2022 12:11:49 AM
Bromobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Bromodichloromethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Bromoform	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Bromomethane	ND	6.0		µg/L	2	2/16/2022 12:11:49 AM
2-Butanone	ND	20		µg/L	2	2/16/2022 12:11:49 AM
Carbon disulfide	ND	20		µg/L	2	2/16/2022 12:11:49 AM
Carbon Tetrachloride	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Chlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Chloroethane	ND	4.0		µg/L	2	2/16/2022 12:11:49 AM
Chloroform	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Chloromethane	ND	6.0		µg/L	2	2/16/2022 12:11:49 AM
2-Chlorotoluene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
4-Chlorotoluene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
cis-1,2-DCE	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	2/16/2022 12:11:49 AM
Dibromochloromethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Dibromomethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2-Dichlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,3-Dichlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,4-Dichlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Dichlorodifluoromethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1-Dichloroethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1-Dichloroethene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2-Dichloropropane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,3-Dichloropropane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
2,2-Dichloropropane	ND	4.0		µg/L	2	2/16/2022 12:11:49 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2202582**
Date Reported: **2/17/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW1R
Project: McCoy Gas Com D1E **Collection Date:** 2/10/2022 1:00:00 PM
Lab ID: 2202582-001 **Matrix:** AQUEOUS **Received Date:** 2/11/2022 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,1-Dichloropropene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Hexachlorobutadiene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
2-Hexanone	ND	20		µg/L	2	2/16/2022 12:11:49 AM
Isopropylbenzene	58	2.0		µg/L	2	2/16/2022 12:11:49 AM
4-Isopropyltoluene	22	2.0		µg/L	2	2/16/2022 12:11:49 AM
4-Methyl-2-pentanone	ND	20		µg/L	2	2/16/2022 12:11:49 AM
Methylene Chloride	ND	6.0		µg/L	2	2/16/2022 12:11:49 AM
n-Butylbenzene	ND	6.0		µg/L	2	2/16/2022 12:11:49 AM
n-Propylbenzene	54	2.0		µg/L	2	2/16/2022 12:11:49 AM
sec-Butylbenzene	14	2.0		µg/L	2	2/16/2022 12:11:49 AM
Styrene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
tert-Butylbenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	2/16/2022 12:11:49 AM
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
trans-1,2-DCE	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1,1-Trichloroethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,1,2-Trichloroethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Trichloroethene (TCE)	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Trichlorofluoromethane	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
1,2,3-Trichloropropane	ND	4.0		µg/L	2	2/16/2022 12:11:49 AM
Vinyl chloride	ND	2.0		µg/L	2	2/16/2022 12:11:49 AM
Xylenes, Total	300	3.0		µg/L	2	2/16/2022 12:11:49 AM
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%Rec	2	2/16/2022 12:11:49 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	2	2/16/2022 12:11:49 AM
Surr: Dibromofluoromethane	89.9	70-130		%Rec	2	2/16/2022 12:11:49 AM
Surr: Toluene-d8	104	70-130		%Rec	2	2/16/2022 12:11:49 AM

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2202582**
17-Feb-22

Client: HILCORP ENERGY
Project: McCoy Gas Com D1E

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R85850** RunNo: **85850**
Prep Date: Analysis Date: **2/15/2022** SeqNo: **3023019** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2202582**
17-Feb-22

Client: HILCORP ENERGY
Project: McCoy Gas Com D1E

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R85850** RunNo: **85850**
Prep Date: Analysis Date: **2/15/2022** SeqNo: **3023019** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R85850** RunNo: **85850**
Prep Date: Analysis Date: **2/15/2022** SeqNo: **3023314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202582**

17-Feb-22

Client: HILCORP ENERGY

Project: McCoy Gas Com D1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R85850**	RunNo: **85850**							
Prep Date:	Analysis Date: **2/15/2022**	SeqNo: **3023314**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	19	1.0	20.00	0	97.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R85889**	RunNo: **85889**							
Prep Date:	Analysis Date: **2/16/2022**	SeqNo: **3024523**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R85889**	RunNo: **85889**							
Prep Date:	Analysis Date: **2/16/2022**	SeqNo: **3024524**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Qualifiers:

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

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: HILCORP ENERGY Work Order Number: 2202582 RcptNo: 1

Received By: **Tracy Casarrubias** 2/11/2022 8:00:00 AM

Completed By: **Tracy Casarrubias** 2/11/2022 10:54:45 AM

Reviewed By: JM 2/11/22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° 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: KPG 2/11/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #: 505-486-9543

email or Fax#: khookstra@hilcorp.com

QA/QC Package: mkillough@hilcorp.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: McCoy Gas Com D #1E

Project #:

Project Manager: Mitch Killough

Sampler: Kurt

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 3.3 - 0 = 3.3 (°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. 2202582	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)
2-10	1:00	GW	MW 1R	VOA (3)	HCL	001								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2-10	1423	Kurt Hookstra	Mitch Wall		2/10/22	1423
2/10/22	1747	Mitch Wall		ccam	2/11/22	9:00

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: www.hallenvironmental.com

May 11, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: McCoy Gas Com D 1E OrderNo.: 2204C88

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/29/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2204C88**
Date Reported: **5/11/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-1R
Project: McCoy Gas Com D 1E **Collection Date:** 4/28/2022 1:25:00 PM
Lab ID: 2204C88-001 **Matrix:** AQUEOUS **Received Date:** 4/29/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **CCM**
Benzene	ND	2.0		µg/L	2	5/5/2022 6:24:00 AM
Toluene	ND	2.0		µg/L	2	5/5/2022 6:24:00 AM
Ethylbenzene	170	2.0		µg/L	2	5/5/2022 6:24:00 AM
Xylenes, Total	580	30		µg/L	20	5/6/2022 4:49:00 AM
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%Rec	2	5/5/2022 6:24:00 AM
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	2	5/5/2022 6:24:00 AM
Surr: Dibromofluoromethane	96.5	70-130		%Rec	2	5/5/2022 6:24:00 AM
Surr: Toluene-d8	108	70-130		%Rec	2	5/5/2022 6:24:00 AM

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204C88**

11-May-22

Client: HILCORP ENERGY

Project: McCoy Gas Com D 1E

Sample ID: **100ng lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL87719**	RunNo: **87719**
Prep Date:	Analysis Date: **5/4/2022**	SeqNo: **3108938** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.4	70	130			
Toluene	19	1.0	20.00	0	97.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL87719**	RunNo: **87719**
Prep Date:	Analysis Date: **5/4/2022**	SeqNo: **3108939** 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								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID: **100ng lcs 2**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL87773**	RunNo: **87773**
Prep Date:	Analysis Date: **5/6/2022**	SeqNo: **3109585** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL87773**	RunNo: **87773**
Prep Date:	Analysis Date: **5/6/2022**	SeqNo: **3109586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2204C88 RcptNo: 1

Received By: **Tracy Casarrubias** 4/29/2022 7:10:00 AM

Completed By: **Sean Livingston** 4/29/2022 8:57:22 AM S Livingston

Reviewed By: JR 4/29/22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° 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: DAD 04/29/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good				

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

McCoy Gas Com D 1E

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.4-0=1.4

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. 2204C88	BTEX Method 8260
4-28	1325	Water	MW-1R	(3) 40ml VOA	HCL	001	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4-28	1450				4/28/22	1450
4/28/22	1807			Courier	4/29/22	7:10

Remarks: Special Pricing See Andy

cc: mkillough@hilcorp.com

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: www.hallenvironmental.com

August 08, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: McCoy Gas Com D 1E OrderNo.: 2207F74

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/30/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2207F74**
Date Reported: **8/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-1R
Project: McCoy Gas Com D 1E **Collection Date:** 7/29/2022 12:20:00 PM
Lab ID: 2207F74-001 **Matrix:** AQUEOUS **Received Date:** 7/30/2022 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	2.0	D	µg/L	2	8/2/2022 8:42:13 PM
Toluene	ND	2.0	D	µg/L	2	8/2/2022 8:42:13 PM
Ethylbenzene	6.9	2.0	D	µg/L	2	8/2/2022 8:42:13 PM
Xylenes, Total	52	3.0	D	µg/L	2	8/2/2022 8:42:13 PM
Surr: 1,2-Dichloroethane-d4	108	70-130	D	%Rec	2	8/2/2022 8:42:13 PM
Surr: 4-Bromofluorobenzene	110	70-130	D	%Rec	2	8/2/2022 8:42:13 PM
Surr: Dibromofluoromethane	103	70-130	D	%Rec	2	8/2/2022 8:42:13 PM
Surr: Toluene-d8	96.8	70-130	D	%Rec	2	8/2/2022 8:42:13 PM

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F74**

08-Aug-22

Client: HILCORP ENERGY

Project: McCoy Gas Com D 1E

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL89979**	RunNo: **89979**
Prep Date:	Analysis Date: **8/2/2022**	SeqNo: **3206414** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL89979**	RunNo: **89979**
Prep Date:	Analysis Date: **8/2/2022**	SeqNo: **3206416** 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	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2207F74 RcptNo: 1

Received By: **Tracy Casarrubias** 7/30/2022 9:30:00 AM

Completed By: **Tracy Casarrubias** 7/30/2022 11:01:47 AM

Reviewed By: SCM 8/1/22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples not Fozen
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: JN 8/1/22

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: McCoy Gas Com D 1E

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): -0.1 - 0 = -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. 2207F74	BTEX Method 8260
7-29	1220	Water	MW-1R	(3) 40ml VOA	HCL	001	X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-29	1435		Christ Ward		7/29/22	1435
7/29/22	1710	Christine Walters		car	7/30/22	9:30

Remarks: Special Pricing See Andy

Seal on cooler - THC 7/30/22

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: www.hallenvironmental.com

November 02, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: McCoy Gas Com D 1E OrderNo.: 2210D65

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/27/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2210D65**
Date Reported: **11/2/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-1R
Project: McCoy Gas Com D 1E **Collection Date:** 10/26/2022 3:00:00 PM
Lab ID: 2210D65-001 **Matrix:** AQUEOUS **Received Date:** 10/27/2022 6:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	ND	5.0	D	µg/L	5	10/28/2022 9:34:14 PM
Toluene	ND	5.0	D	µg/L	5	10/28/2022 9:34:14 PM
Ethylbenzene	12	5.0	D	µg/L	5	10/28/2022 9:34:14 PM
Xylenes, Total	100	7.5	D	µg/L	5	10/28/2022 9:34:14 PM
Surr: 1,2-Dichloroethane-d4	87.9	70-130	D	%Rec	5	10/28/2022 9:34:14 PM
Surr: 4-Bromofluorobenzene	105	70-130	D	%Rec	5	10/28/2022 9:34:14 PM
Surr: Dibromofluoromethane	96.2	70-130	D	%Rec	5	10/28/2022 9:34:14 PM
Surr: Toluene-d8	104	70-130	D	%Rec	5	10/28/2022 9:34:14 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210D65**

02-Nov-22

Client: HILCORP ENERGY

Project: McCoy Gas Com D 1E

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R92188**	RunNo: **92188**							
Prep Date:	Analysis Date: **10/28/2022**	SeqNo: **3309937**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: **100ng lcs3**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R92188**	RunNo: **92188**							
Prep Date:	Analysis Date: **10/29/2022**	SeqNo: **3309938**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.6		10.00		95.5	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R92188**	RunNo: **92188**							
Prep Date:	Analysis Date: **10/28/2022**	SeqNo: **3310038**	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		98.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R92188**	RunNo: **92188**							
Prep Date:	Analysis Date: **10/29/2022**	SeqNo: **3310039**	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								

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210D65**

02-Nov-22

Client: HILCORP ENERGY

Project: McCoy Gas Com D 1E

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92188**	RunNo: **92188**
Prep Date:	Analysis Date: **10/29/2022**	SeqNo: **3310039** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: HILCORP ENERGY Work Order Number: 2210D65 RcptNo: 1

Received By: Juan Rojas 10/27/2022 6:45:00 AM

Completed By: Tracy Casarrubias 10/27/2022 9:44:28 AM

Reviewed By: KPA 10-27-22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° 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: JM 10/27/22

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: McCoy Gas Com D 1E

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.6+0.2=0.8

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. 2210D105	BTEX Method 8260
10-26	1500	Water	MW-1R	(3) 40ml VOA	HCL	001	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
10-26	1541				10/26/22	1541
10/26/22	1806			Courier	10/27/22	6:45

Remarks: Special Pricing See Andy

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 200715

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 200715
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2022 Annual Groundwater Monitoring Report for McCoy Gas Com D 1E: Content is incomplete for closure 1. In order to meet abatement completion and closure of the incident, Hilcorp must submit an abatement and completion report for the site in accordance with 19.15.30.19 of the NMAC 2. With the closure and completion report there must be a work plan also submitted for sampling the vadose zone to demonstrate the release at the site has met closure criteria and the abatement standards, as per 19.15.30.9 paragraph D of the NMAC. 3. Please upload the approved Groundwater Monitoring Plan into the incident/well file via online permitting site.	5/22/2024