



ENSOLUM

March 20, 2025

New Mexico Oil Conservation Division

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

Re: 2024 Annual Groundwater Monitoring Report

State Com J #6
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NJK1326741691
NMOCD Administrative Order: 3RP-468

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2024 Annual Groundwater Monitoring Report* to the New Mexico Oil Conservation Division (NMOCD) to document groundwater monitoring activities conducted at the State Com J #6 natural gas production site (Site) during 2024. The Site is located on surface managed by the New Mexico State Land Office in Unit L, Section 36, Township 31 North, Range 9 West, San Juan County, New Mexico (Figure 1).

SITE BACKGROUND

In 2013, the previous Site operator, ConocoPhillips Company, discovered a release of produced water and condensate from the San Juan C4 gas pipeline at a crossing in an ephemeral wash (Figure 2). Upon discovery, the associated production wells were immediately shut in, and the release location was bermed to prevent lateral migration of surface fluids. Initial response actions included excavating and trenching around the pipeline to remove visibly impacted soil. During soil removal activities, groundwater infiltrated and pooled at the base of the excavation. In total, 275 cubic yards of impacted soil and 60 barrels (bbls) of petroleum hydrocarbon-impacted groundwater were removed. Depth to groundwater during excavation was approximately 5 feet below ground surface (bgs).

Following initial excavation activities, four groundwater recovery wells (RW-1 through RW-4) and one monitoring well (MW-1) were installed at the Site in 2014. The recovery wells were used to extract light non-aqueous phase liquids (LNAPL), also referred to as phase-separated hydrocarbons (PSH) in this report, as well as dissolved phase petroleum hydrocarbons. To further remediate the release area, mobile dual-phase extraction (MDPE) events were conducted in August 2014, November 2014, April 2015, and November 2017, resulting in the recovery of 777 gallons of PSH. At the request of the NMOCD, two additional monitoring wells (MW-2 and MW-3) were installed in 2016 to assess down-gradient and cross-gradient conditions.

Quarterly groundwater monitoring at the site began in 2016, with PSH recovery from wells RW-1 through RW-4 initiated in 2017 using hand bailing and absorbent socks. Additionally, GHD, the former environmental consultant for the Site, used a vacuum truck to remove approximately

40 bbls of PSH and impacted water from these wells during the fourth quarter of 2019. As presented in the *2019 Annual Groundwater Monitoring Report* prepared by GHD (dated March 3, 2020), a minimum of 0.11 gallons of PSH was removed during this event.

Following the review of the *2021 Annual Groundwater Monitoring Report* for State Com J#6, the NMOCD approved transitioning to an annual groundwater sampling schedule on May 17, 2024. As a result, the groundwater sampling schedule was adjusted from quarterly to annual starting in 2024. The agency also recommended assessing alternative remediation strategies for more efficient PSH recovery; however, measurable PSH has not been observed in any monitoring or recovery wells at the Site since June 2023.

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 milligrams per liter (mg/L).

- Benzene: 0.005 mg/L
- Toluene: 1.0 mg/L
- Ethylbenzene: 0.70 mg/L
- Total Xylenes: 0.62 mg/L
- Total Naphthalene: 0.03 mg/L

In addition, NMWQCC standards state that LNAPL/PSH shall not be present floating on the groundwater.

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

Groundwater level measurements and groundwater samples were collected at the Site on February 28, 2024. Prior to sampling, static groundwater levels and depth to PSH, if present, were measured at each monitoring well using an oil/water interface probe. To prevent cross-contamination, the interface probe was decontaminated with Alconox[®] soap and rinsed with distilled water prior to each measurement. Groundwater elevations recorded during the 2024 sampling event are presented in Table 1 and were used to develop a groundwater potentiometric surface map (Figure 3) The inferred groundwater flow direction at the Site is to the southwest.

GROUNDWATER SAMPLING

Groundwater from each monitoring well 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, total dissolved solids, and electrical conductivity were recorded during the purging process and are presented in Table 2.

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. Samples were immediately sealed with zero headspace and packed on ice to preserve the samples. Samples were submitted to Eurofins Environmental Analysis Laboratory (Eurofins) in Albuquerque, New Mexico for analysis of the following contaminants of concern (COCs): benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total naphthalene following 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. Analytical laboratory reports from the sampling events are included as Appendix A.

GROUNDWATER ANALYTICAL RESULTS

During the February 2024 sampling event, benzene, ethylbenzene, total xylenes, and total naphthalene were detected at RW-1, RW-3, and RW-4 at concentrations below NMWQCC standards. Toluene was not detected above laboratory reporting limits in any of the wells, which are below the NMWQCC standard. Benzene, toluene, ethylbenzene, total xylenes (BTEX), and total naphthalene were not detected above laboratory reporting limits or NMWQCC standards in MW-1, MW-2, MW-3, and RW-2 during 2024. Groundwater laboratory analytical results are summarized in Table 3 and presented in Figure 5.

CONCLUSIONS AND RECOMMENDATIONS

Overall, the presence of PSH and concentrations of dissolved BTEX and total naphthalene in groundwater have decreased over time at the Site. Measurable PSH has not been observed in any monitoring or recovery wells at the Site since June 2023. Dissolved BTEX and total naphthalene concentrations have never been detected above laboratory reporting limits and/or NMWQCC standards within groundwater from wells MW-2 and MW-3. Additionally, BTEX and total naphthalene concentrations have not been detected above the NMWQCC standards since May 2019 and March 2020 in wells MW-1 and RW-2, respectively. Although still present in wells RW-1, RW-3, and RW-4, dissolved BTEX and total naphthalene concentrations appear stable and decreasing, with all wells reporting levels below NMWQCC standards in 2024. Furthermore, historical sampling of down and cross-gradient wells at the Site indicates the plume has not migrated from the original release location.

Based on current and historical data collected at the Site, Ensolum/Hilcorp recommend the following actions:

- Discontinue sampling at wells MW-1, MW-2, MW-3, and RW-2. Site COCs have been in compliance with NMWQCC standards for at least 17 consecutive sampling events.
- Continue annual groundwater sampling of RW-1, RW-3, and RW-4. Once BTEX and naphthalene concentrations meet NMWQCC standards, the sampling frequency will be increased until compliance is confirmed for eight consecutive quarters.
- Continue gauging all Site wells for depth to groundwater and depth to PSH measurements on an annual basis and resume PSH removal via absorbent socks and hand bailing if rebound is observed.

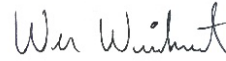
Ensolum appreciates the opportunity to provide these environmental services to Hilcorp. Please contact either of the undersigned with any questions.

Sincerely,

Ensolum, LLC



Nicole Pottala
Associate Geologist
(405) 593-6647
npottala@ensolum.com



Wes Weichert, PG (Licensed in WY)
Project Geologist
(816) 266-8732
wweichert@ensolum.com

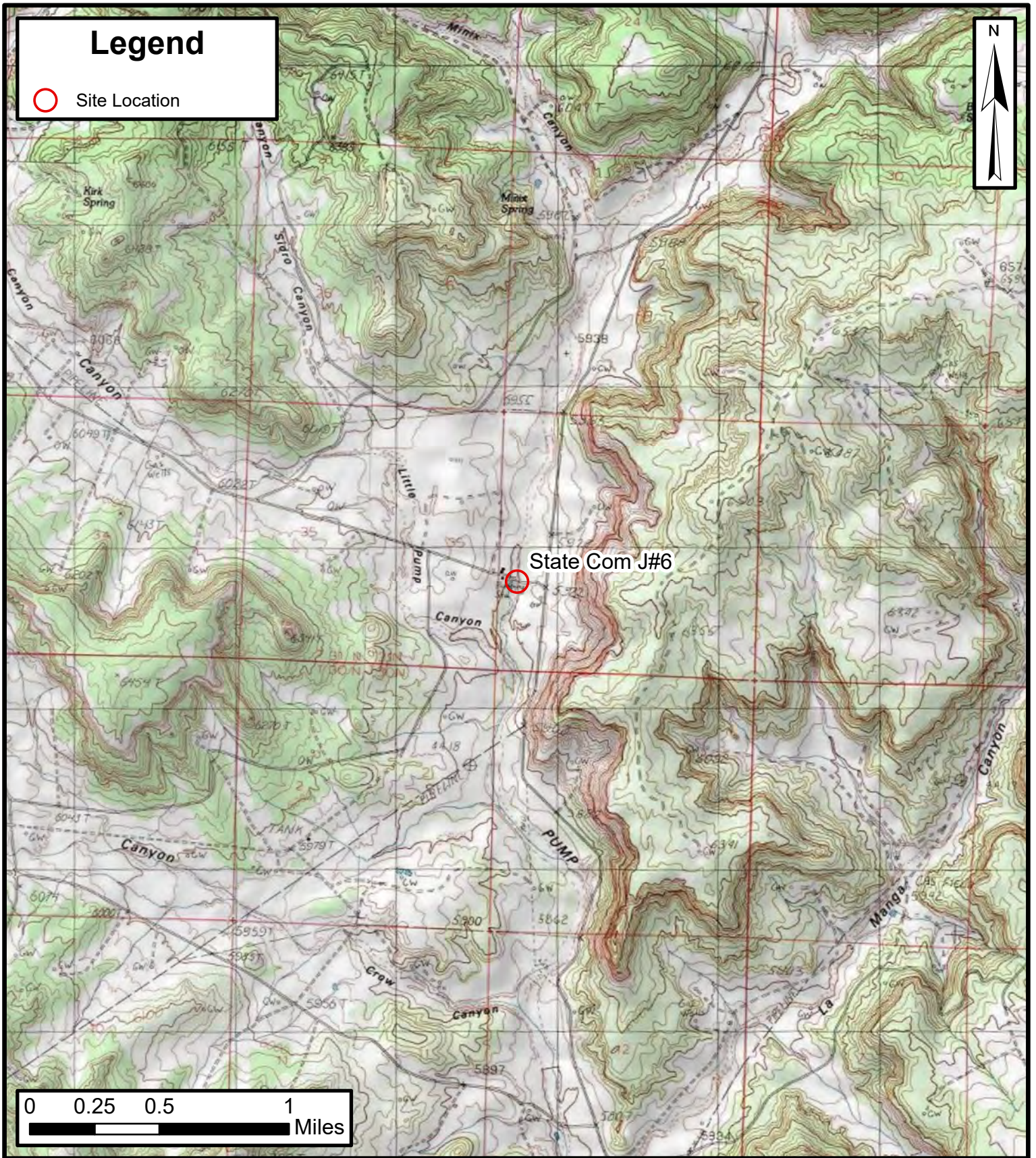
Attachments:

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	February 2024 Groundwater Elevation Contours
Figure 4	February 2024 Groundwater Analytical Results
Table 1	Groundwater Elevations
Table 2	Groundwater Quality Measurements
Table 3	Groundwater Analytical Results
Appendix A	Analytical Laboratory Reports



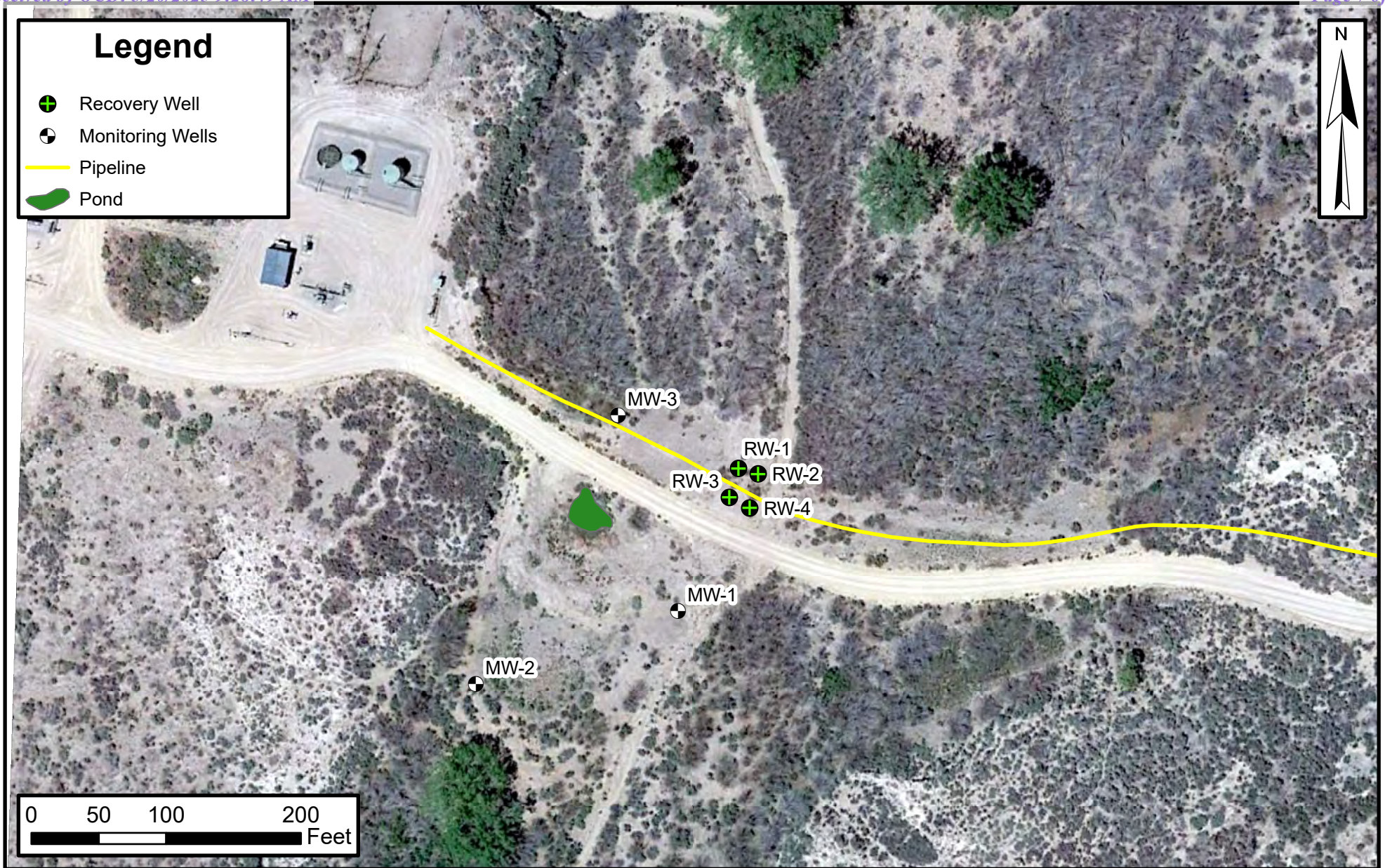
FIGURES





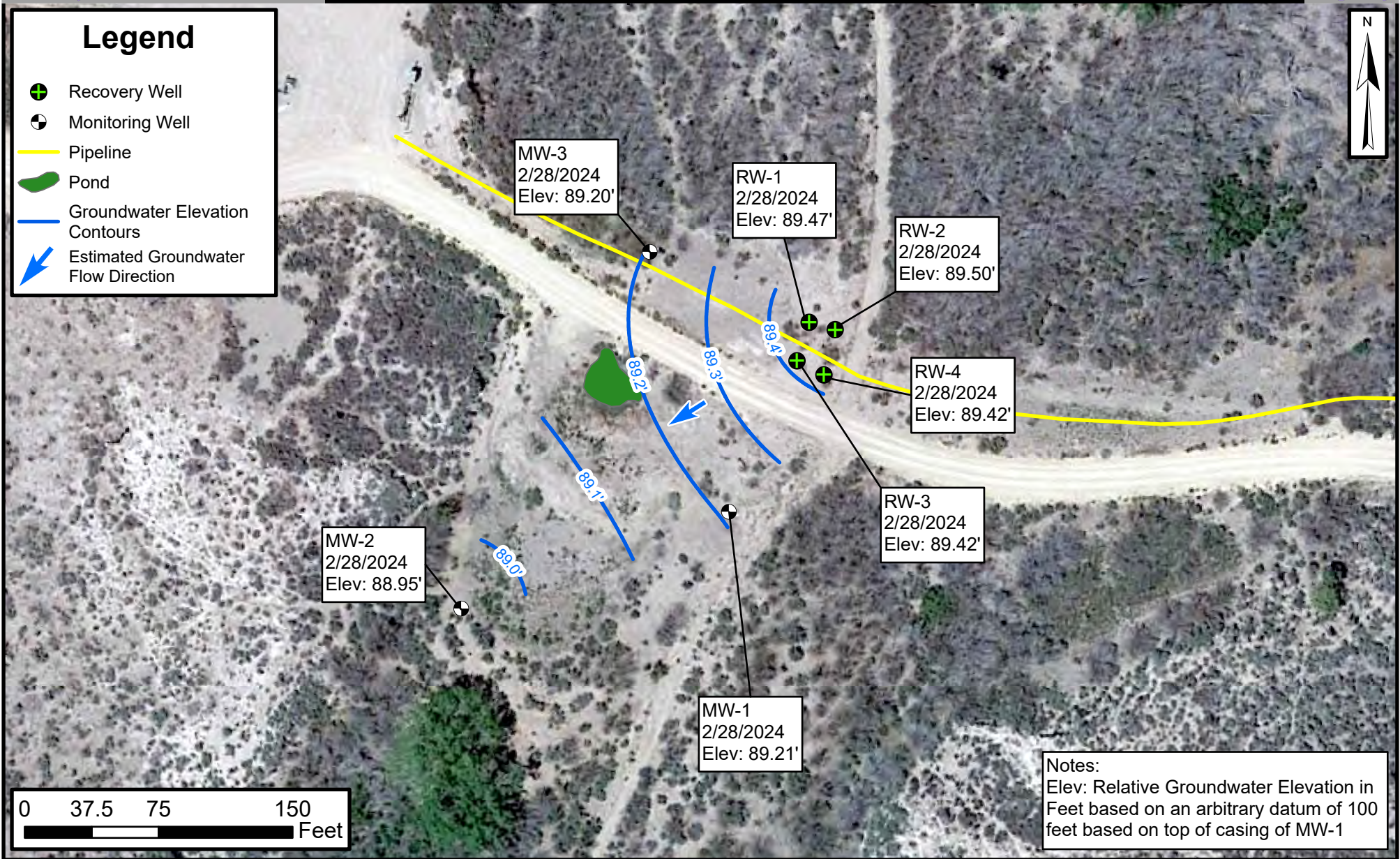
Site Location Map
 State Com J#6
 Hilcorp Energy Company
 36.85231, -107.74007
 San Juan County, New Mexico

FIGURE
1



Site Map
State Com J#6
Hilcorp Energy Company
36.85231, -107.74007
San Juan County, New Mexico

**FIGURE
2**



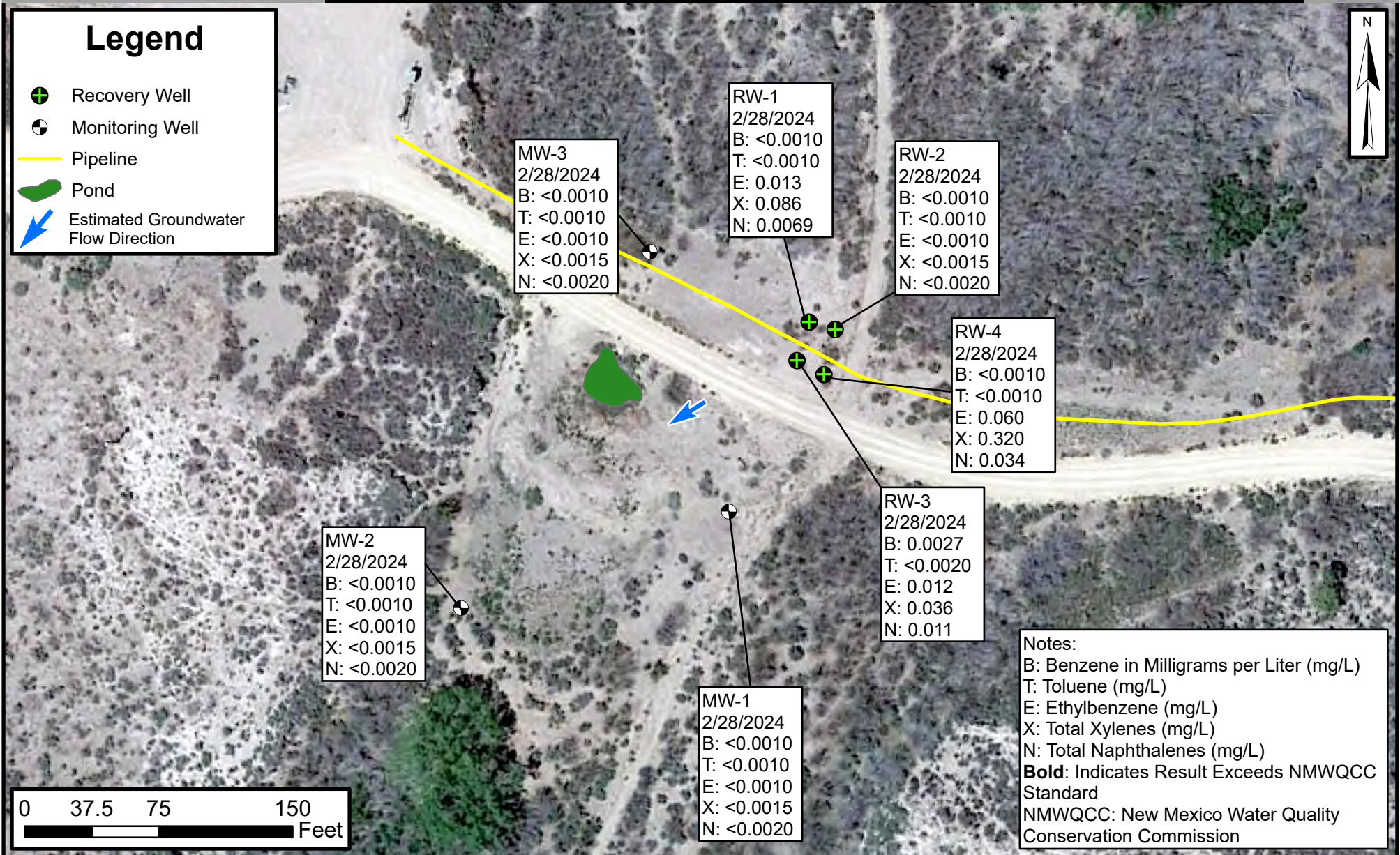
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February 2024 Groundwater Elevation Contours

State Com J#6
 Hilcorp Energy Company
 36.85231, -107.74007
 San Juan County, New Mexico

FIGURE 3



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February 2024 Groundwater Analytical Results

State Com J#6
 Hilcorp Energy Company
 36.85231, -107.74007
 San Juan County, New Mexico

FIGURE
4



TABLES



TABLE 1
GROUNDWATER ELEVATIONS
 State Com J #6
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
MW-1	100.00	5/12/2014	7.98	--	--	92.02
		5/20/2014	8.14	--	--	91.86
		5/27/2014	8.10	--	--	91.90
		12/17/2014	8.53	--	--	91.47
		4/21/2015	8.20	--	--	91.80
		5/14/2015	8.18	--	--	91.82
		9/22/2015	8.43	--	--	91.57
		12/2/2015	8.29	--	--	91.71
		3/30/2016	7.92	--	--	92.08
		9/8/2016	9.55	--	--	90.45
		12/1/2016	8.96	--	--	91.04
		3/9/2017	8.09	--	--	91.91
		6/15/2017	8.54	--	--	91.46
		9/27/2017	9.97	--	--	90.03
		12/6/2017	9.25	--	--	90.75
		3/15/2018	8.91	--	--	91.09
		6/27/2018	9.78	--	--	90.22
		9/5/2018	10.43	--	--	89.57
		12/20/2018	9.97	--	--	90.03
		3/9/2019	9.33	--	--	90.67
		5/29/2019	8.82	--	--	91.18
		8/21/2019	10.53	--	--	89.47
		11/21/2019	10.41	--	--	89.59
		3/28/2020	9.81	--	--	90.19
		6/3/2020	10.09	--	--	89.91
		7/28/2020	11.03	--	--	88.97
		10/9/2020	11.46	--	--	88.54
		1/18/2021	10.86	--	--	89.14
		4/22/2021	10.49	--	--	89.51
		9/21/2021	11.80	--	--	88.20
		11/29/2021	11.43	--	--	88.57
		2/3/2022	11.12	--	--	88.88
5/25/2022	10.92	--	--	89.08		
8/25/2022	10.41	--	--	89.59		
12/15/2022	10.64	--	--	89.36		
3/21/2023	8.88	--	--	91.12		
6/9/2023	9.16	--	--	90.84		
8/11/2023	10.85	--	--	89.15		
11/15/2023	11.23	--	--	88.77		



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Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
MW-1	100.00	2/28/2024	10.79	--	--	89.21
		9/30/2024	DRY	--	--	DRY
MW-2	99.36	12/1/2016	8.57	--	--	90.79
		3/9/2017	7.73	--	--	91.63
		6/15/2017	8.27	--	--	91.09
		9/27/2017	9.70	--	--	89.66
		12/6/2017	8.90	--	--	90.46
		3/15/2018	8.54	--	--	90.82
		6/27/2018	9.49	--	--	89.87
		9/5/2018	10.17	--	--	89.19
		12/20/2018	9.59	--	--	89.77
		3/9/2019	8.95	--	--	90.41
		5/29/2019	8.46	--	--	90.90
		8/21/2019	10.24	--	--	89.12
		11/21/2019	10.05	--	--	89.31
		3/27/2020	9.43	--	--	89.93
		6/3/2020	10.09	--	--	89.27
		7/27/2020	10.74	--	--	88.62
		10/9/2020	11.15	--	--	88.21
		1/18/2021	10.49	--	--	88.87
		4/22/2021	10.10	--	--	89.26
		9/21/2021	11.50	--	--	87.86
		11/19/2021	11.11	--	--	88.25
		2/3/2022	10.72	--	--	88.64
		5/25/2022	10.58	--	--	88.78
		8/25/2022	10.09	--	--	89.27
12/15/2022	10.25	--	--	89.11		
3/21/2023	8.43	--	--	90.93		
6/9/2023	8.82	--	--	90.54		
8/11/2023	10.58	--	--	88.78		
11/15/2023	10.89	--	--	88.47		
2/28/2024	10.41	--	--	88.95		
9/30/2024	12.91	--	--	86.45		
MW-3	99.59	12/1/2016	8.51	--	--	91.08
		3/9/2017	7.64	--	--	91.95
		6/15/2017	8.05	--	--	91.54
		9/27/2017	9.51	--	--	90.08
		12/6/2017	8.80	--	--	90.79
		3/15/2018	8.47	--	--	91.12



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Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
MW-3	99.59	6/27/2018	9.31	--	--	90.28
		9/5/2018	9.99	--	--	89.60
		12/20/2018	9.51	--	--	90.08
		3/9/2019	8.95	--	--	90.64
		5/29/2019	8.36	--	--	91.23
		8/21/2019	10.07	--	--	89.52
		11/20/2019	9.98	--	--	89.61
		3/27/2020	9.38	--	--	90.21
		6/2/2020	9.63	--	--	89.96
		7/27/2020	10.59	--	--	89.00
		10/9/2020	11.03	--	--	88.56
		1/18/2021	10.44	--	--	89.15
		4/22/2021	10.07	--	--	89.52
		9/21/2021	11.40	--	--	88.19
		11/19/2021	11.08	--	--	88.51
		2/3/2022	10.72	--	--	88.87
		5/25/2022	10.52	--	--	89.07
		8/25/2022	10.05	--	--	89.54
		12/15/2022	10.28	--	--	89.31
		3/21/2023	8.85	--	--	90.74
6/9/2023	8.77	--	--	90.82		
8/11/2023	10.47	--	--	89.12		
11/15/2023	10.83	--	--	88.76		
2/28/2024	10.39	--	--	89.20		
9/30/2024	11.85	--	--	87.74		
RW-1	100.3	5/12/2014	7.80	--	--	92.50
		5/20/2014	7.85	--	--	92.45
		5/27/2014	7.90	7.89	0.01	92.41
		12/17/2014	8.72	8.33	0.39	91.89
		5/14/2015	7.99	--	--	92.31
		6/17/2015	7.98	7.96	0.02	92.34
		9/22/2015	8.72	8.57	0.15	91.70
		12/2/2015	8.19	8.17	0.02	92.13
		9/14/2016	10.10	9.11	0.99	90.99
		12/1/2016	--	--	--	DRY
		3/9/2017	8.01	--	--	92.29
		6/15/2017	8.50	8.35	0.15	91.92
		9/27/2017	10.82	9.60	1.22	90.46
12/6/2017	9.59	9.09	0.50	91.11		



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Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
RW-1	100.3	3/15/2018	8.98	8.83	0.15	91.44
		6/27/2018	10.11	9.52	0.59	90.66
		9/5/2018	11.01	10.18	0.83	89.95
		1/4/2019	10.12	9.77	0.35	90.46
		3/9/2019	9.32	--	--	90.98
		5/28/2019	8.72	--	--	91.58
		8/21/2019	--	--	--	DRY
		11/12/2019	--	--	--	DRY
		3/31/2020	9.81	--	--	90.49
		6/1/2020	9.97	--	--	90.33
		7/29/2020	11.42	10.87	0.55	89.32
		10/9/2020	11.36	--	--	88.94
		1/15/2021	10.87	--	--	89.43
		4/21/2021	10.49	--	--	89.81
		9/21/2021	11.82	11.79	0.03	88.50
		11/29/2021	11.43	--	--	88.87
		1/31/2022	11.13	--	--	89.17
		5/25/2022	10.92	--	--	89.38
		8/25/2022	10.42	--	--	89.88
		12/15/2022	10.73	--	--	89.57
		3/21/2023	9.14	--	--	91.16
		6/9/2023	9.24	Trace	Trace	91.06
6/11/2023	10.82	--	--	89.48		
11/15/2023	11.27	--	--	89.03		
2/28/2024	10.83	--	--	89.47		
9/30/2024	12.09	--	--	88.21		
RW-2	99.96	5/12/2014	7.45	7.44	0.01	92.52
		5/20/2014	7.67	7.66	0.01	92.30
		5/27/2014	7.56	--	--	92.40
		12/17/2014	8.39	7.98	0.41	91.90
		5/14/2015	7.65	--	--	92.31
		6/17/2015	7.61	--	--	92.35
		9/22/2015	8.25	--	--	91.71
		12/2/2015	7.82	--	--	92.14
		9/14/2016	9.68	8.77	0.91	91.01
		12/1/2016	8.65	8.51	--	91.31
		3/9/2017	7.74	--	--	92.22
		6/15/2017	8.03	--	--	91.93
		9/27/2017	10.14	9.33	0.81	90.47



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RW-2	99.96	12/6/2017	9.22	8.72	0.50	91.14
		3/15/2018	8.55	8.46	0.09	91.48
		6/27/2017	9.59	9.25	0.34	90.64
		9/5/2018	10.36	9.90	0.46	89.97
		1/4/2019	9.51	--	--	90.45
		3/9/2019	8.95	--	--	91.01
		5/28/2019	8.39	--	--	91.57
		8/21/2019	10.08	--	--	89.88
		11/12/2019	10.08	--	--	89.88
		3/31/2020	9.43	--	--	90.53
		6/1/2020	9.66	--	--	90.30
		7/29/2020	10.60	--	--	89.36
		10/12/2020	11.06	--	--	88.90
		1/15/2021	10.52	--	--	89.44
		4/21/2021	10.12	--	--	89.84
		9/21/2021	11.50	--	--	88.46
		11/29/2021	11.13	--	--	88.83
		1/31/2022	10.78	--	--	89.18
		5/25/2022	10.55	--	--	89.41
		8/25/2022	10.08	--	--	89.88
		12/15/2022	10.29	--	--	89.67
		3/21/2023	8.75	--	--	91.21
		6/9/2023	8.81	--	--	91.15
8/11/2023	10.49	--	--	89.47		
11/15/2023	10.96	--	--	89.00		
2/28/2024	10.46	--	--	89.50		
9/30/2024	11.85	--	--	88.11		
RW-3	99.84	5/12/2014	7.46	--	--	92.38
		5/20/2014	7.66	--	--	92.18
		5/27/2014	7.59	--	--	92.25
		8/26/2014	10.43	8.70	1.73	90.79
		11/11/2014	8.64	8.22	0.42	91.54
		12/17/2014	8.55	7.94	0.61	91.78
		5/14/2015	7.63	7.63	0.00	92.21
		6/17/2015	7.76	7.58	0.18	92.22
		9/22/2015	8.45	8.20	0.25	91.59
		12/2/2015	8.11	7.74	0.37	92.03
		9/14/2016	9.94	8.71	1.23	90.88
		12/1/2016	8.98	8.46	0.52	91.28



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RW-3	99.84	3/9/2017	7.73	7.70	0.03	92.13
		6/15/2017	7.95	--	--	91.89
		9/27/2017	10.50	9.22	1.28	90.36
		12/6/2017	9.28	8.69	0.59	91.03
		3/15/2018	8.77	8.40	0.37	91.37
		6/27/2018	9.73	9.14	0.59	90.58
		9/5/2018	10.94	9.69	1.25	89.90
		1/4/2019	9.39	--	--	90.45
		3/9/2019	8.90	--	--	90.94
		5/28/2019	8.39	--	--	91.45
		8/21/2019	--	--	--	DRY
		11/12/2019	--	--	--	DRY
		3/31/2020	9.38	--	--	90.46
		6/2/2020	9.56	--	--	90.28
		7/29/2020	10.41	10.40	0.01	89.44
		10/12/2020	10.67	--	--	89.17
		1/15/2021	10.50	10.48	0.02	89.36
		4/21/2021	10.09	--	--	89.75
		9/21/2021	11.45	11.35	0.10	88.47
		11/30/2021	11.07	--	--	88.77
		2/2/2022	10.75	--	--	89.09
		5/25/2022	10.52	--	--	89.32
		8/25/2022	10.05	--	--	89.79
		12/15/2022	10.29	--	--	89.55
		3/21/2023	8.72	--	--	91.12
		6/9/2023	8.79	Trace	Trace	91.05
8/11/2023	10.44	--	--	89.40		
11/15/2023	10.85	--	--	88.99		
2/28/2024	10.42	--	--	89.42		
9/30/2024	11.84	--	--	88.00		
RW-4	99.67	5/12/2014	7.30	7.29	0.01	92.38
		5/20/2014	8.12	7.26	0.86	92.24
		5/27/2014	7.98	7.22	0.76	92.30
		8/25/2014	9.80	8.47	1.33	90.93
		11/10/2014	8.15	7.94	0.21	91.69
		12/17/2014	8.10	7.84	0.26	91.78
		4/20/2015	7.61	7.36	0.25	92.26
		5/14/2015	7.46	--	--	92.21
6/17/2015	7.48	7.43	0.05	92.23		



TABLE 1
GROUNDWATER ELEVATIONS
 State Com J #6
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
RW-4	99.67	9/22/2015	8.17	8.04	0.13	91.60
		12/2/2015	7.70	7.65	0.05	92.01
		9/14/2016	9.75	8.53	1.22	90.90
		12/1/2016	8.66	8.46	0.20	91.17
		3/9/2017	7.54	7.47	0.07	92.19
		6/15/2017	7.69	--	--	-7.69
		9/27/2017	10.33	9.04	1.29	90.37
		12/6/2017	8.82	8.59	0.23	91.03
		3/15/2018	8.30	8.29	0.01	91.38
		6/27/2018	9.86	8.91	0.95	90.57
		9/5/2018	10.59	9.50	1.09	89.95
		1/4/2019	9.19	--	--	90.48
		3/9/2019	8.70	--	--	90.97
		5/28/2019	8.15	--	--	91.52
		8/21/2019	--	--	--	DRY
		11/12/2019	--	--	--	DRY
		3/31/2020	9.22	--	--	90.45
		6/2/2020	9.30	--	--	90.37
		7/29/2020	10.21	--	--	89.46
		10/12/2020	10.67	--	--	89.00
		1/15/2021	10.22	10.20	0.02	89.45
		4/21/2021	9.91	--	--	89.76
		9/21/2021	11.90	11.10	0.80	87.77
		11/30/2021	10.69	--	--	88.98
		2/2/2022	10.52	--	--	89.15
		5/25/2022	NM	--	--	NM
		8/25/2022	9.83	--	--	89.84
		12/15/2022	10.03	--	--	89.64
3/21/2023	8.22	--	--	91.45		
6/9/2023	8.72	Trace	Trace	90.95		
8/11/2023	10.33	--	--	89.34		
11/15/2023	11.22	--	--	88.45		
2/28/2024	10.25	--	--	89.42		
9/30/2024	12.03	--	--	87.64		

Notes:

(1): surface elevation based on an arbitrary datum of 100 feet based on top of casing of MW-1

amsl: above mean sea level

BTOC: below top of casing

--: indicates no GWEL or PSH measured



TABLE 1
GROUNDWATER ELEVATIONS
State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Top of Casing Elevation (feet amsl) (1)	Date	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet amsl)
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Groundwater elevation is adjusted using a density correction factor of 0.8 when product is present



TABLE 2
GROUNDWATER QUALITY MEASUREMENTS

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)
MW-1	5/14/2015	11.68	7.52	3,221	4,976	--	-205.0
	5/14/2015	11.32	7.35	3,309	5,096	2.83	-205.0
	5/14/2015	11.34	7.28	3,341	5,139	1.66	-204.0
	9/22/2015	16.41	7.01	1,164	1,792	9.11	-117.5
	9/22/2015	16.42	6.98	1,177	1,811	2.96	-117.6
	9/22/2015	16.43	6.99	1,152	1,771	2.48	-117.0
	3/30/2016	10.36	7.48	1,200	1,920	5.62	-104.0
	9/8/2016	16.10	7.10	877	1,353	1.52	-91.1
	12/1/2016	12.55	7.49	--	1,664	2.64	-110.6
	3/9/2017	8.45	7.31	1,403	2,157	1.81	-158.2
	6/15/2017	11.52	7.27	1,390	2,125	0.74	-203.1
	9/27/2017	15.35	6.93	--	1,790	--	--
	12/6/2017	12.14	7.00	1,318	2,022	2.15	-69.5
	3/15/2018	9.90	7.35	--	1,790	0.62	-112.6
	6/27/2018	16.73	6.97	--	1,959	1.04	-96.4
	9/5/2018	17.10	7.46	--	1,898	4.17	-109.1
	3/9/2019	11.20	7.16	1,020	2,050	--	-24.3
	5/29/2019	15.50	7.01	1,060	2,120	--	-17.5
	8/21/2019	23.90	6.74	1,070	2,140	--	-15.4
	11/20/2019	10.30	6.35	920	1,830	--	-21.9
	3/28/2020	10.40	6.49	1,000	1,980	5.13	-9.3
	6/3/2020	20.40	6.60	--	2,020	1.00	-7.0
	7/28/2020	20.70	6.79	1,070	2,140	1.03	-9.4
	10/9/2020	20.60	6.55	1,010	2,020	2.68	-1.2
	1/18/2021	12.30	6.58	960	1,910	0.98	7.4
	4/22/2021	13.20	6.70	980	1,970	8.66	4.3
	9/21/2021	18.00	6.99	--	5,750	--	--
	11/29/2021	11.70	6.23	--	1,850	--	--
	2/3/2022	9.40	6.77	--	1,770	--	--
	5/25/2022	14.90	6.29	830	1,660	--	--
8/25/2022	20.50	6.46	800	1,590	--	--	
12/15/2022	8.70	6.94	810	1,620	--	--	
3/21/2023	5.00	7.46	370	730	--	--	
6/9/2023	15.50	7.42	--	1,300	9.91	28.9	
8/11/2023	30.90	8.01	0.92	1,408	1.61	-154.1	
11/15/2023	20.68	7.70	1.31	2,012	2.87	-137.7	
2/28/2024	20.81	8.02	0.06	85.06	1.91	-266.60	
MW-2	12/1/2016	9.75	8.11	--	1,980	6.29	-128.8
	3/9/2017	7.58	7.24	1,812	2,788	1.72	-144.7
	6/15/2017	10.24	7.64	1,494	2,298	4.09	-148.3
	9/27/2017	13.76	7.12	--	2,009	--	--
	12/6/2017	11.09	6.96	1,394	2,145	4.22	-63.1
	3/15/2018	8.19	7.32	--	2,302	0.13	-75.6
	6/27/2018	12.49	7.17	--	2,104	0.57	-41.9
	9/5/2018	16.74	7.52	--	1,954	4.76	-13.1
3/9/2019	9.80	7.24	1,090	2,180	--	-27.9	



**TABLE 2
GROUNDWATER QUALITY MEASUREMENTS**

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)
MW-2	5/29/2019	14.40	7.11	1,160	2,330	--	-17.4
	8/21/2019	22.40	7.26	1,110	2,220	--	-15.1
	11/20/2019	11.20	6.32	1,030	2,530	--	-26.6
	3/27/2020	9.90	6.92	1,110	2,220	--	-15.8
	6/3/2020	18.20	6.31	--	2,180	1.11	-17.4
	7/27/2020	24.20	6.99	1,050	2,100	1.77	-18.6
	10/9/2020	18.20	6.51	1,010	2,010	3.33	-11.0
	1/18/2021	9.10	6.85	960	1,940	1.23	-1.4
	4/22/2021	11.80	7.04	1,000	1,980	0.39	-2.7
	9/21/2021	15.70	6.90	--	6,060	--	--
	11/19/2021	13.10	6.53	--	1,920	--	--
	2/3/2022	8.90	6.76	--	1,870	--	--
	5/25/2022	14.50	6.29	930	1,850	--	--
	8/25/2022	21.20	6.49	1,040	2,080	--	--
	12/15/2022	6.90	7.05	990	1,980	--	--
	3/21/2023	6.70	7.20	930	1,860	--	--
	6/9/2023	11.66	7.73	--	1,468	4.20	-169.9
8/11/2023	31.24	7.87	1.61	2,472	2.12	-99.6	
11/15/2023	20.19	7.58	2.00	3,076	2.97	-99.8	
2/28/2024	21.75	7.93	1.43	2,203.8	3.54	-228.5	
MW-3	12/1/2016	12.09	7.39	--	2,200	2.30	-53.7
	3/9/2017	7.48	7.42	1,709	2,614	3.58	-124.2
	6/15/2017	10.06	7.41	1,407	2,164	2.53	-149.4
	9/27/2017	12.76	7.39	--	1,914	--	--
	12/6/2017	10.06	6.93	1,339	2,060	1.74	-58.2
	3/15/2018	8.10	7.23	--	2,142	0.75	18.0
	6/27/2018	12.49	7.17	--	2,104	0.57	-41.9
	9/5/2018	14.22	7.46	--	2,064	1.17	-4.3
	3/9/2019	7.60	7.28	1,130	2,260	--	-20.6
	5/29/2019	13.10	7.03	1,300	2,590	--	-15.6
	8/21/2019	7.05	--	1,130	2,250	--	-26.0
	11/20/2019	12.80	6.31	1,300	2,390	--	-26.6
	3/27/2020	10.10	6.54	1,140	2,300	--	-16.7
	6/2/2020	19.50	6.35	1,130	2,270	1.13	-11.9
	7/27/2020	19.40	6.47	1,110	2,380	1.30	-14.7
	10/9/2020	16.90	6.55	1,030	1,910	3.46	-17.6
	1/18/2021	10.40	6.92	1,000	2,000	1.19	-13.2
	4/22/2021	13.30	7.00	1,060	2,130	7.72	-11.2
	9/21/2021	13.50	6.86	--	6,370	--	--
	11/19/2021	14.20	6.46	--	2,050	--	--
2/3/2022	7.80	6.93	--	1,880	--	--	
5/25/2022	14.60	6.79	970	1,940	--	--	
8/25/2022	19.20	6.52	980	1,960	--	--	
12/15/2022	6.70	7.20	1,020	2,030	--	--	
3/21/2023	6.40	7.18	1,060	2,120	--	--	
6/9/2023	13.03	7.38	--	3,390	8.37	-134.1	



**TABLE 2
GROUNDWATER QUALITY MEASUREMENTS**

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)
MW-3	8/11/2023	31.35	7.66	0.01	15.29	1.75	-76.2
	11/15/2023	19.50	7.67	2.03	3,116	2.67	-71.3
	2/28/2024	21.24	7.94	0.01	17.01	2.86	-220.2
RW-1	3/31/2020	14.40	6.19	1,010	2,080	6.10	2.8
	6/1/2020	19.60	6.12	--	2,000	0.98	-10.1
	7/29/2020	--	--	--	--	--	--
	10/12/2020	16.20	6.70	930	1,850	3.91	-28.9
	1/15/2021	10.20	6.77	920	1,840	1.06	-37.7
	4/21/2021	13.40	6.71	1,000	2,000	--	-27.3
	9/21/2021	--	--	--	--	--	--
	11/29/2021	14.50	6.73	--	1,690	--	--
	1/31/2022	13.00	6.62	--	1,830	--	--
	5/25/2022	16.60	6.84	870	1,750	--	--
	8/25/2022	20.20	6.31	910	1,820	--	--
	12/15/2022	8.40	6.63	630	1,260	--	--
	3/21/2023	6.20	6.37	1,200	2,410	--	--
	6/9/2023	No Field Quality Measurements taken, PSH present					
6/9/2023	26.41	7.22	2.04	3,131	4.56	-82.2	
11/15/2023	20.46	7.49	1.67	2,576	2.12	61.0	
2/28/2024	21.21	7.81	1.85	2,850.8	1.48	-94.9	
RW-2	3/31/2020	13.50	6.35	1,060	2,120	6.24	2.3
	6/2/2020	17.80	--	1,050	2,090	1.05	-1.3
	7/29/2020	19.40	6.72	1,070	2,120	1.13	-13.3
	10/12/2020	17.40	6.73	980	1,970	3.99	-6.0
	1/15/2021	10.40	7.02	960	1,930	0.99	-1.3
	4/21/2021	13.20	6.86	1,000	1,990	--	1.8
	9/21/2021	20.20	7.09	--	5,450	--	--
	11/29/2021	14.40	6.62	--	1,870	--	--
	1/31/2022	13.00	6.62	--	1,890	--	--
	5/25/2022	16.60	6.86	900	1,810	--	--
	8/25/2022	19.40	6.53	800	1,600	--	--
	12/15/2022	8.30	6.74	650	1,310	--	--
	3/21/2023	5.90	6.82	390	780	--	--
	6/9/2023	12.83	7.45	--	220	8.33	-29.1
8/11/2023	28.58	7.48	1.25	1,919	5.82	-104.8	
11/15/2023	20.45	7.75	1.36	2,094	3.39	-54.5	
2/28/2024	24.61	8.16	0.01	16.17	1.56	-99.9	
RW-3	3/31/2020	14.10	6.16	1,080	2,130	7.24	6.4
	6/2/2020	19.50	6.38	--	2,130	1.06	2.6
	7/29/2020	--	--	--	--	--	--
	10/12/2020	21.90	6.49	970	1,930	3.64	12.3
	1/15/2021	13.30	6.72	950	1,900	0.99	12.3
	4/21/2021	15.20	6.67	970	1,960	8.78	9.8



TABLE 2
GROUNDWATER QUALITY MEASUREMENTS
 State Com J #6
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Identification	Date	Temperature (°C)	pH	TDS (mg/L)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	
RW-3	9/21/2021	--	--	--	--	--	--	
	11/30/2021	15.40	6.57	--	1,530	--	--	
	2/2/2022	10.90	6.70	--	1,630	--	--	
	5/25/2022	18.00	6.62	800	1,590	--	--	
	8/25/2022	22.50	6.45	800	1,590	--	--	
	12/15/2022	8.80	6.74	530	1,070	--	--	
	3/21/2023	7.10	6.93	620	1,230	--	--	
	6/9/2023	No Field Quality Measurements taken, PSH present						
	8/11/2023	29.85	7.94	1.07	1,636	1.44	-235.9	
	11/15/2023	20.10	7.78	1.38	2,120	1.61	-108.9	
2/28/2024	15.34	8.06	1.09	1,672.9	1.83	-134.7		
RW-4	3/31/2020	13.40	6.28	970	1,940	6.98	-21.5	
	6/2/2020	--	--	--	--	--	--	
	7/29/2020	--	--	--	--	--	--	
	10/12/2020	20.90	6.68	950	1,910	2.96	-34.2	
	1/15/2021	11.20	6.68	940	1,880	1.02	-38.4	
	4/21/2021	12.40	6.85	930	1,860	1.30	-35.2	
	9/21/2021	--	--	--	--	--	--	
	11/30/2021	16.20	6.53	-	1,480	--	--	
	2/2/2022	11.10	6.87		1,600	--	--	
	5/25/2022	No Field Quality Measurements taken, PSH present						
	8/25/2022	20.70	6.45	610	1,260	--	--	
	12/15/2022	9.20	1.05	6,500	530	--	--	
	3/21/2023	6.10	7.18	700	1,400	--	--	
	6/9/2023	No Field Quality Measurements taken, PSH present						
	8/11/2023	30.63	7.91	0.48	703	0.37	-242.3	
11/15/2023	20.29	7.96	0.68	1,044	0.29	-115.3		
2/28/2024	22.41	8.08	1.17	1,794.1	0.00	-405.8		

Notes:

- °C: degrees Celsius
- DO: dissolved oxygen
- uS/cm: microsiemens per centimeter
- mg/L: milligrams per liter
- mV: millivolts
- ORP: oxidation-reduction potential
- TDS: total dissolved solids
- : data not collected
- PSH: phase separated hydrocarbons



TABLE 3
GROUNDWATER ANALYTICAL RESULTS
 State Com J #6
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total Naphthalenes (mg/L)
NMWQCC Standards		0.005	1.00	0.70	0.62	0.03
MW-1	5/12/2014	0.0134	0.0304	0.0152	0.228	0.0017
	9/23/2014	0.01	< 0.001	0.0033	0.0233	< 0.0005
	12/17/2014	0.0252	< 0.001	0.0121	0.0488	0.00085
	5/14/2015	0.0041	< 0.001	0.0056	0.0121	< 0.00045
	9/22/2015	0.0463	< 0.001	0.0214	0.115	0.0012
	9/8/2016	0.0121	< 0.001	0.0124	0.0817	0.001
	12/1/2016	<0.001	<0.001	<0.001	<0.003	<0.0005
	3/9/2017	0.0028	<0.001	<0.001	<0.003	--
	6/15/2017	0.0431	<0.001	0.0022	0.0038	--
	9/27/2017	0.0067	<0.001	0.0056	0.0338	--
	12/6/2017	<0.001	<0.001	<0.001	<0.003	--
	3/15/2018	<0.001	<0.001	<0.001	<0.003	--
	6/27/2018	0.0043	<0.001	0.005	0.0123	--
	9/5/2018	<0.001	<0.001	<0.001	<0.003	--
	12/20/2018	<0.001	<0.001	<0.001	<0.003	--
	3/15/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	5/29/2019	0.0083	<0.001	0.0017	0.0051	<0.005
	8/21/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	11/21/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	3/31/2020	<0.001	<0.001	<0.001	<0.003	<0.00025
	6/3/2020	<0.001	<0.001	<0.001	<0.003	--
	7/28/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	10/9/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	1/18/2021	<0.001	<0.001	<0.001	<0.003	<0.005
	4/22/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	9/21/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	11/29/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	2/3/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	5/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	8/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
12/15/2022	<0.001	<0.001	<0.001	<0.0015	<0.004	
3/21/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
6/9/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
8/11/2023	0.0061	<0.0020	0.0052	<0.0030	<0.0040	
11/15/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
2/28/2024	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
MW-2	9/26/2016	<0.001	<0.001	<0.001	<0.003	<0.0005
	12/1/2016	<0.001	<0.001	<0.001	<0.003	<0.0005
	3/9/2017	<0.001	<0.001	<0.001	<0.003	--
	6/15/2017	<0.001	<0.001	<0.001	<0.003	--



TABLE 3
GROUNDWATER ANALYTICAL RESULTS
 State Com J #6
 Hilcorp Energy Company
 San Juan County, New Mexico

Well Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total Naphthalenes (mg/L)
NMWQCC Standards		0.005	1.00	0.70	0.62	0.03
MW-2	9/27/2017	<0.001	<0.001	<0.001	<0.003	--
	12/6/2017	<0.001	<0.001	<0.001	<0.003	--
	3/15/2018	<0.001	<0.001	<0.001	<0.003	--
	6/27/2018	<0.001	<0.001	<0.001	<0.003	--
	9/5/2018	<0.001	<0.001	<0.001	<0.003	--
	12/20/2018	<0.001	<0.001	<0.001	<0.003	--
	3/9/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	5/29/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	8/21/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	11/21/2019	<0.001	<0.001	<0.001	<0.003	--
	3/31/2020	<0.001	<0.001	<0.001	<0.003	<0.00025
	6/3/2020	<0.001	<0.001	<0.001	<0.003	--
	7/27/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	10/9/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	1/18/2021	<0.001	<0.001	<0.001	<0.003	<0.005
	4/22/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	9/21/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	11/19/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	2/3/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	5/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	8/25/2022	<0.002	<0.002	<0.002	<0.003	<0.004
12/15/2022	<0.001	<0.001	<0.001	<0.0015	<0.004	
3/21/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
6/9/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
8/11/2023	<0.0020	<0.0020	<0.0020	<0.0030	<0.0040	
11/15/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
2/28/2024	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
MW-3	9/26/2016	<0.001	<0.001	<0.001	<0.003	<0.0005
	12/1/2016	<0.001	<0.001	<0.001	<0.003	<0.0005
	3/9/2017	<0.001	<0.001	<0.001	<0.003	--
	6/15/2017	<0.001	<0.001	<0.001	<0.003	--
	9/27/2017	<0.001	<0.001	<0.001	<0.003	--
	12/6/2017	<0.001	<0.001	<0.001	<0.003	--
	3/15/2018	<0.001	<0.001	<0.001	<0.003	--
	6/27/2018	<0.001	<0.001	<0.001	<0.003	--
	9/5/2018	<0.001	<0.001	<0.001	<0.003	--
	12/20/2018	<0.001	<0.001	<0.001	<0.003	--
	3/9/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	5/29/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	8/21/2019	<0.001	<0.001	<0.001	<0.003	<0.005



**TABLE 3
GROUNDWATER ANALYTICAL RESULTS**

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total Naphthalenes (mg/L)
NMWQCC Standards		0.005	1.00	0.70	0.62	0.03
MW-3	11/20/2019	<0.001	<0.001	<0.001	<0.003	<0.005
	3/31/2020	<0.001	<0.001	<0.001	<0.003	<0.00025
	6/2/2020	<0.001	<0.001	<0.001	<0.003	--
	7/27/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	10/9/2020	<0.001	<0.001	<0.001	<0.003	<0.005
	1/18/2021	<0.001	<0.001	<0.001	<0.003	<0.005
	4/22/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	9/21/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	11/19/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	2/3/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	5/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	8/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	12/15/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	3/21/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020
	6/9/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020
	8/11/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020
11/15/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
2/28/2024	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
RW-1	5/12/2014	1.88	6.27	0.567	8.96	0.109
	5/14/2015	0.688	0.764	0.388	5.65	0.121
	3/9/2019	--	--	--	--	--
	5/28/2019	0.349	<0.025	0.240	5.76	0.133
	8/21/2019	Not Sampled - PSH Present				
	11/20/2019	Not Sampled - PSH Present				
	3/31/2020	0.151	<0.050	0.499	6.77	0.291
	6/3/2020	0.156	<0.050	0.511	8.73	--
	7/29/2020	Not Sampled - PSH Present				
	10/12/2020	0.121	<0.050	1.07	18.1	0.956
	1/18/2021	0.0573	<0.050	0.233	3.30	<0.25
	4/21/2021	0.033	<0.010	0.180	2.30	1.052
	9/21/2021	Not Sampled - PSH Present				
	11/29/2021	0.014	<0.008	0.180	1.70	0.166
	1/31/2022	0.0059	<0.002	0.130	1.30	0.129
	5/25/2022	<0.002	<0.002	0.110	0.91	0.125
	8/25/2022	<0.005	<0.005	0.067	0.380	0.054
	12/15/2022	<0.005	<0.005	0.160	0.92	0.231
	3/21/2023	<0.0020	<0.0020	0.057	0.310	0.016
6/9/2023	Not Sampled - PSH Present					
8/11/2023	<0.0050	<0.0050	0.056	0.30	0.015	
11/15/2023	<0.0020	<0.0020	0.052	0.330	0.016	



**TABLE 3
GROUNDWATER ANALYTICAL RESULTS**

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total Naphthalenes (mg/L)
NMWQCC Standards		0.005	1.00	0.70	0.62	0.03
RW-1	2/28/2024	<0.0010	<0.0010	0.013	0.086	0.0069
RW-2	3/9/2019	--	--	--	--	--
	5/28/2019	0.0404	<0.01	0.096	1.05	0.056
	9/4/2019	0.0083	<0.001	0.045	0.376	0.064
	11/20/2019	0.0026	<0.01	0.0280	0.355	0.005
	3/31/2020	0.003	<0.001	0.0385	0.734	0.029
	6/1/2020	<0.010	<0.010	0.0324	0.298	--
	7/29/2020	<0.002	<0.002	0.0095	0.109	0.013
	10/12/2020	<0.001	<0.001	0.0016	0.0147	<0.500
	1/18/2021	<0.001	<0.001	0.0024	0.00929	<0.005
	4/21/2021	<0.001	<0.001	0.0023	0.0099	<0.002
	9/21/2021	<0.001	<0.001	<0.001	<0.0015	<0.002
	11/29/2021	<0.001	<0.001	<0.001	0.0026	<0.002
	1/31/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	5/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	8/25/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	12/15/2022	<0.001	<0.001	<0.001	<0.0015	<0.004
	3/21/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020
	6/9/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020
	8/11/2023	<0.0020	<0.0020	<0.0020	<0.0030	<0.0040
11/15/2023	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
2/28/2024	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	
RW-3	5/12/2014	0.416	0.889	0.153	4.58	0.0596
	3/9/2019	--	--	#VALUE!	--	--
	5/28/2019	0.386	<0.010	0.191	1.80	<0.500
	8/21/2019	Not Sampled - PSH Present				
	11/20/2019	Not Sampled - PSH Present				
	3/31/2020	0.414	<0.100 D	0.385	6.76	0.395
	6/2/2020	0.703	<0.100	2.49	35.7	--
	7/29/2020	Not Sampled - PSH Present				
	10/12/2020	1.28	<0.100	0.466	7.09	<0.500
	1/18/2021	0.160	<0.100	0.181	2.98	<0.500
	4/21/2021	0.110	<0.005	0.180	2.30	0.288
	9/21/2021	Not Sampled - PSH Present				
	11/30/2021	0.025	<0.005	0.047	0.66	0.176
	2/2/2022	0.014	<0.005	0.037	0.53	0.148
	5/25/2022	0.027	<0.005	0.068	0.76	0.260
8/25/2022	0.020	<0.002	0.0026	0.0120	<0.008	
12/15/2022	0.044	<0.005	0.045	0.27	0.252	



**TABLE 3
GROUNDWATER ANALYTICAL RESULTS**

State Com J #6
Hilcorp Energy Company
San Juan County, New Mexico

Well Identification	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total Naphthalenes (mg/L)
NMWQCC Standards		0.005	1.00	0.70	0.62	0.03
RW-3	3/21/2023	0.086	<0.0050	0.048	0.20	0.02
	6/9/2023	Not Sampled - PSH Present				
	8/11/2023	0.075	<0.0050	0.071	0.170	0.033
	11/15/2023	0.0042	<0.0050	0.0052	0.010	<0.0010
	2/28/2024	0.0027	<0.0020	0.012	0.036	0.011
RW-4	3/9/2019	--	--	--	--	--
	5/28/2019	0.321	<0.05	0.071	5.78	<0.250
	8/21/2019	Not Sampled - PSH Present				
	11/20/2019	Not Sampled - PSH Present				
	3/31/2020	0.152	<0.100 D	0.300	5.74	0.385
	6/2/2020	Not Sampled - PSH Present				
	7/29/2020	Not Sampled - PSH Present				
	10/12/2020	0.286	<0.100	3.66	4.88	3.05
	1/18/2021	<0.25	<0.25	1.04	15.8	<1.25
	4/22/2021	0.067	<0.01	0.250	2.90	0.253
	9/21/2021	Not Sampled - PSH Present				
	11/30/2021	0.044	<0.01	0.370	4.60	0.600
	2/2/2022	0.022	<0.010	0.600	5.90	1.220
	5/25/2022	Not Sampled - PSH Present				
	8/25/2022	0.038	<0.010	0.150	1.40	0.178
	12/15/2022	0.038	<0.010	0.200	2.30	0.400
	3/21/2023	<0.0020	<0.0020	0.0084	0.180	0.010
	6/9/2023	Not Sampled - PSH Present				
	8/11/2023	<0.0040	<0.0040	0.075	0.380	0.025
	11/15/2023	0.0054	<0.0050	0.130	0.670	0.085
2/28/2024	<0.010	<0.010	0.060	0.320	0.034	

Notes:

mg/L: milligrams per liter

ND: not detected, practical quantitation limit unknown

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

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

PSH: phase separated hydrocarbons

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



APPENDIX A

Analytical Laboratory Reports



Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 13, 2024

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

RE: State Com J6

OrderNo.: 2403007

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 7 sample(s) on 3/1/2024 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2403007**

Date Reported: **3/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-1

Project: State Com J6

Collection Date: 2/28/2024 2:25:00 PM

Lab ID: 2403007-001

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	1.0		µg/L	1	3/6/2024 6:54:43 PM
Toluene	ND	1.0		µg/L	1	3/6/2024 6:54:43 PM
Ethylbenzene	ND	1.0		µg/L	1	3/6/2024 6:54:43 PM
Naphthalene	ND	2.0		µg/L	1	3/6/2024 6:54:43 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 6:54:43 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 6:54:43 PM
Xylenes, Total	ND	1.5		µg/L	1	3/6/2024 6:54:43 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	3/6/2024 6:54:43 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/6/2024 6:54:43 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	3/6/2024 6:54:43 PM
Surr: Toluene-d8	97.9	70-130		%Rec	1	3/6/2024 6:54:43 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2403007**

Date Reported: **3/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-2

Project: State Com J6

Collection Date: 2/28/2024 3:00:00 PM

Lab ID: 2403007-002

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	1.0		µg/L	1	3/6/2024 7:22:28 PM
Toluene	ND	1.0		µg/L	1	3/6/2024 7:22:28 PM
Ethylbenzene	ND	1.0		µg/L	1	3/6/2024 7:22:28 PM
Naphthalene	ND	2.0		µg/L	1	3/6/2024 7:22:28 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 7:22:28 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 7:22:28 PM
Xylenes, Total	ND	1.5		µg/L	1	3/6/2024 7:22:28 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	3/6/2024 7:22:28 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	3/6/2024 7:22:28 PM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	3/6/2024 7:22:28 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	3/6/2024 7:22:28 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2403007

Date Reported: 3/13/2024

CLIENT: HILCORP ENERGY

Client Sample ID: MW-3

Project: State Com J6

Collection Date: 2/28/2024 3:30:00 PM

Lab ID: 2403007-003

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	1.0		µg/L	1	3/6/2024 7:50:10 PM
Toluene	ND	1.0		µg/L	1	3/6/2024 7:50:10 PM
Ethylbenzene	ND	1.0		µg/L	1	3/6/2024 7:50:10 PM
Naphthalene	ND	2.0		µg/L	1	3/6/2024 7:50:10 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 7:50:10 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 7:50:10 PM
Xylenes, Total	ND	1.5		µg/L	1	3/6/2024 7:50:10 PM
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	3/6/2024 7:50:10 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	3/6/2024 7:50:10 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	3/6/2024 7:50:10 PM
Surr: Toluene-d8	94.6	70-130		%Rec	1	3/6/2024 7:50:10 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2403007

Date Reported: 3/13/2024

CLIENT: HILCORP ENERGY

Client Sample ID: RW-1

Project: State Com J6

Collection Date: 2/28/2024 12:35:00 PM

Lab ID: 2403007-004

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	1.0		µg/L	1	3/6/2024 8:17:52 PM
Toluene	ND	1.0		µg/L	1	3/6/2024 8:17:52 PM
Ethylbenzene	13	1.0		µg/L	1	3/6/2024 8:17:52 PM
Naphthalene	6.9	2.0		µg/L	1	3/6/2024 8:17:52 PM
1-Methylnaphthalene	19	4.0		µg/L	1	3/6/2024 8:17:52 PM
2-Methylnaphthalene	19	4.0		µg/L	1	3/6/2024 8:17:52 PM
Xylenes, Total	86	1.5		µg/L	1	3/6/2024 8:17:52 PM
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	3/6/2024 8:17:52 PM
Surr: 4-Bromofluorobenzene	203	70-130	S	%Rec	1	3/6/2024 8:17:52 PM
Surr: Dibromofluoromethane	94.5	70-130		%Rec	1	3/6/2024 8:17:52 PM
Surr: Toluene-d8	112	70-130		%Rec	1	3/6/2024 8:17:52 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2403007

Date Reported: 3/13/2024

CLIENT: HILCORP ENERGY

Client Sample ID: RW-2

Project: State Com J6

Collection Date: 2/28/2024 1:15:00 PM

Lab ID: 2403007-005

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	1.0		µg/L	1	3/6/2024 8:45:17 PM
Toluene	ND	1.0		µg/L	1	3/6/2024 8:45:17 PM
Ethylbenzene	ND	1.0		µg/L	1	3/6/2024 8:45:17 PM
Naphthalene	ND	2.0		µg/L	1	3/6/2024 8:45:17 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 8:45:17 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/6/2024 8:45:17 PM
Xylenes, Total	ND	1.5		µg/L	1	3/6/2024 8:45:17 PM
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	3/6/2024 8:45:17 PM
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	3/6/2024 8:45:17 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	3/6/2024 8:45:17 PM
Surr: Toluene-d8	102	70-130		%Rec	1	3/6/2024 8:45:17 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2403007

Date Reported: 3/13/2024

CLIENT: HILCORP ENERGY

Client Sample ID: RW-3

Project: State Com J6

Collection Date: 2/28/2024 12:00:00 PM

Lab ID: 2403007-006

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	2.7	2.0		µg/L	2	3/6/2024 9:12:59 PM
Toluene	ND	2.0		µg/L	2	3/6/2024 9:12:59 PM
Ethylbenzene	12	2.0		µg/L	2	3/6/2024 9:12:59 PM
Naphthalene	11	4.0		µg/L	2	3/6/2024 9:12:59 PM
1-Methylnaphthalene	32	8.0		µg/L	2	3/6/2024 9:12:59 PM
2-Methylnaphthalene	41	8.0		µg/L	2	3/6/2024 9:12:59 PM
Xylenes, Total	36	3.0		µg/L	2	3/6/2024 9:12:59 PM
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	2	3/6/2024 9:12:59 PM
Surr: 4-Bromofluorobenzene	172	70-130	S	%Rec	2	3/6/2024 9:12:59 PM
Surr: Dibromofluoromethane	100	70-130		%Rec	2	3/6/2024 9:12:59 PM
Surr: Toluene-d8	132	70-130	S	%Rec	2	3/6/2024 9:12:59 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2403007

Date Reported: 3/13/2024

CLIENT: HILCORP ENERGY

Client Sample ID: RW-4

Project: State Com J6

Collection Date: 2/28/2024 2:00:00 PM

Lab ID: 2403007-007

Matrix: AQUEOUS

Received Date: 3/1/2024 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: CCM
Benzene	ND	10	D	µg/L	10	3/7/2024 1:33:00 PM
Toluene	ND	10	D	µg/L	10	3/7/2024 1:33:00 PM
Ethylbenzene	60	10	D	µg/L	10	3/7/2024 1:33:00 PM
Naphthalene	34	20	D	µg/L	10	3/7/2024 1:33:00 PM
1-Methylnaphthalene	86	40	D	µg/L	10	3/7/2024 1:33:00 PM
2-Methylnaphthalene	110	40	D	µg/L	10	3/7/2024 1:33:00 PM
Xylenes, Total	320	15	D	µg/L	10	3/7/2024 1:33:00 PM
Surr: 1,2-Dichloroethane-d4	97.4	70-130	D	%Rec	10	3/7/2024 1:33:00 PM
Surr: 4-Bromofluorobenzene	128	70-130	D	%Rec	10	3/7/2024 1:33:00 PM
Surr: Dibromofluoromethane	99.2	70-130	D	%Rec	10	3/7/2024 1:33:00 PM
Surr: Toluene-d8	124	70-130	D	%Rec	10	3/7/2024 1:33:00 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 Quantitative 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#: 2403007

13-Mar-24

Client: HILCORP ENERGY

Project: State Com J6

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSW	Batch ID: SL103552	RunNo: 103552								
Prep Date:	Analysis Date: 3/6/2024	SeqNo: 3832470	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	119	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBW	Batch ID: SL103552	RunNo: 103552								
Prep Date:	Analysis Date: 3/6/2024	SeqNo: 3832477	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								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSW	Batch ID: SL103575	RunNo: 103575								
Prep Date:	Analysis Date: 3/7/2024	SeqNo: 3833527	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.6	70	130			
Toluene	18	1.0	20.00	0	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2403007

13-Mar-24

Client: HILCORP ENERGY

Project: State Com J6

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBW	Batch ID: SL103575		RunNo: 103575							
Prep Date:	Analysis Date: 3/7/2024		SeqNo: 3833528		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								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



Sample Log-In Check List

Client Name: **HILCORP ENERGY**

Work Order Number: **2403007**

RcptNo: **1**

Received By: **Tracy Casarrubias**

3/1/2024 7:15:00 AM

Completed By: **Tracy Casarrubias**

3/1/2024 8:14:37 AM

Reviewed By: *mc 3/1/24*

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: *mc 3/1/24*

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	Morty		

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)

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: Yes No *morH*

of Coolers: *1*

Cooler Temp (including CF): *33 ± 0 = 3.3°C*

Container Type Preservative Type HEAL No.
and # *2403007*

(3) 40ml VOA HCL *001*

(3) 40ml VOA HCL *002*

(3) 40ml VOA HCL *003*

(3) 40ml VOA HCL *004*

(3) 40ml VOA HCL *005*

(3) 40ml VOA HCL *006*

(3) 40ml VOA HCL *007*

Date: *2/29/24* Time: *1520*

Relinquished by: *Brandon Sinclair*

Date: *2/29/24* Time: *1754*

Relinquished by: *Justin Wolk*

Received by:

Justin Wolk Date: *2/29/24* Time: *1520*

Received by: *CAUNER* Date: *3/1/24* Time: *7:15*

Remarks: Special Pricing See Andy



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Sample Name	Matrix	Date	Time	Container Type	Preservative Type	HEAL No.	Analysis Request
MW-1	Water	2-28	1925	(3) 40ml VOA	HCL	001	X
MW-2	Water	1500		(3) 40ml VOA	HCL	002	X
MW-3	Water	1530		(3) 40ml VOA	HCL	003	X
RW-1	Water	1235		(3) 40ml VOA	HCL	004	X
RW-2	Water	1315		(3) 40ml VOA	HCL	005	X
RW-3	Water	1200		(3) 40ml VOA	HCL	006	X
RW-4	Water	1400		(3) 40ml VOA	HCL	007	X

BTEX Method 8260
Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene

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.



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Mitch Killough
 Hilcorp Energy
 PO BOX 4700
 Farmington, New Mexico 87499

Generated 7/2/2024 4:28:21 PM

JOB DESCRIPTION

State Com J6

JOB NUMBER

885-5945-1

Eurofins Albuquerque
 4901 Hawkins NE
 Albuquerque NM 87109



Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



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7/2/2024 4:28:21 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: State Com J6

Laboratory Job ID: 885-5945-1



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Definitions/Glossary

Client: Hilcorp Energy
Project/Site: State Com J6

Job ID: 885-5945-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Hilcorp Energy
Project: State Com J6

Job ID: 885-5945-1

Job ID: 885-5945-1

Eurofins Albuquerque

Job Narrative 885-5945-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 6/11/2024 6:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.9°C.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Albuquerque



Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: MW-1

Lab Sample ID: 885-5945-1

Date Collected: 06/07/24 15:00

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			06/19/24 05:33	1
Ethylbenzene	ND		1.0	ug/L			06/19/24 05:33	1
Toluene	ND		1.0	ug/L			06/19/24 05:33	1
Xylenes, Total	ND		1.5	ug/L			06/19/24 05:33	1
2-Methylnaphthalene	ND		4.0	ug/L			06/19/24 05:33	1
Naphthalene	ND		2.0	ug/L			06/19/24 05:33	1
1-Methylnaphthalene	ND		4.0	ug/L			06/19/24 05:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130		06/19/24 05:33	1
4-Bromofluorobenzene (Surr)	111		70 - 130		06/19/24 05:33	1
Dibromofluoromethane (Surr)	87		70 - 130		06/19/24 05:33	1
Toluene-d8 (Surr)	97		70 - 130		06/19/24 05:33	1

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: MW-2

Lab Sample ID: 885-5945-2

Date Collected: 06/07/24 15:30

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			06/19/24 05:58	1
Ethylbenzene	ND		1.0	ug/L			06/19/24 05:58	1
Toluene	ND		1.0	ug/L			06/19/24 05:58	1
Xylenes, Total	ND		1.5	ug/L			06/19/24 05:58	1
2-Methylnaphthalene	ND		4.0	ug/L			06/19/24 05:58	1
Naphthalene	ND		2.0	ug/L			06/19/24 05:58	1
1-Methylnaphthalene	ND		4.0	ug/L			06/19/24 05:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		06/19/24 05:58	1
4-Bromofluorobenzene (Surr)	111		70 - 130		06/19/24 05:58	1
Dibromofluoromethane (Surr)	86		70 - 130		06/19/24 05:58	1
Toluene-d8 (Surr)	95		70 - 130		06/19/24 05:58	1

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: MW-3

Lab Sample ID: 885-5945-3

Date Collected: 06/07/24 16:00

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			06/19/24 06:22	1
Ethylbenzene	ND		1.0	ug/L			06/19/24 06:22	1
Toluene	ND		1.0	ug/L			06/19/24 06:22	1
Xylenes, Total	ND		1.5	ug/L			06/19/24 06:22	1
2-Methylnaphthalene	ND		4.0	ug/L			06/19/24 06:22	1
Naphthalene	ND		2.0	ug/L			06/19/24 06:22	1
1-Methylnaphthalene	ND		4.0	ug/L			06/19/24 06:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		06/19/24 06:22	1
4-Bromofluorobenzene (Surr)	109		70 - 130		06/19/24 06:22	1
Dibromofluoromethane (Surr)	89		70 - 130		06/19/24 06:22	1
Toluene-d8 (Surr)	99		70 - 130		06/19/24 06:22	1

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: RW-1

Lab Sample ID: 885-5945-4

Date Collected: 06/07/24 13:00

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0	ug/L			06/20/24 19:13	10
Ethylbenzene	170		10	ug/L			06/20/24 19:13	10
Toluene	ND		10	ug/L			06/20/24 19:13	10
Xylenes, Total	1100		15	ug/L			06/20/24 19:13	10
2-Methylnaphthalene	48		40	ug/L			06/20/24 19:13	10
Naphthalene	51		20	ug/L			06/20/24 19:13	10
1-Methylnaphthalene	ND		40	ug/L			06/20/24 19:13	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		06/20/24 19:13	10
4-Bromofluorobenzene (Surr)	106		70 - 130		06/20/24 19:13	10
Dibromofluoromethane (Surr)	100		70 - 130		06/20/24 19:13	10
Toluene-d8 (Surr)	108		70 - 130		06/20/24 19:13	10

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: RW-2

Lab Sample ID: 885-5945-5

Date Collected: 06/07/24 12:00

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			06/20/24 18:48	1
Ethylbenzene	ND		1.0	ug/L			06/20/24 18:48	1
Toluene	ND		1.0	ug/L			06/20/24 18:48	1
Xylenes, Total	ND		1.5	ug/L			06/20/24 18:48	1
2-Methylnaphthalene	ND		4.0	ug/L			06/20/24 18:48	1
Naphthalene	ND		2.0	ug/L			06/20/24 18:48	1
1-Methylnaphthalene	ND		4.0	ug/L			06/20/24 18:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		06/20/24 18:48	1
4-Bromofluorobenzene (Surr)	105		70 - 130		06/20/24 18:48	1
Dibromofluoromethane (Surr)	104		70 - 130		06/20/24 18:48	1
Toluene-d8 (Surr)	94		70 - 130		06/20/24 18:48	1

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: RW-3

Lab Sample ID: 885-5945-6

Date Collected: 06/07/24 13:40

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.0		5.0	ug/L			06/20/24 19:37	10
Ethylbenzene	12		10	ug/L			06/20/24 19:37	10
Toluene	ND		10	ug/L			06/20/24 19:37	10
Xylenes, Total	20		15	ug/L			06/20/24 19:37	10
2-Methylnaphthalene	ND		40	ug/L			06/20/24 19:37	10
Naphthalene	ND		20	ug/L			06/20/24 19:37	10
1-Methylnaphthalene	ND		40	ug/L			06/20/24 19:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		06/20/24 19:37	10
4-Bromofluorobenzene (Surr)	100		70 - 130		06/20/24 19:37	10
Dibromofluoromethane (Surr)	103		70 - 130		06/20/24 19:37	10
Toluene-d8 (Surr)	103		70 - 130		06/20/24 19:37	10

Client Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: RW-4

Lab Sample ID: 885-5945-7

Date Collected: 06/07/24 14:25

Matrix: Water

Date Received: 06/11/24 06:35

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		8.0	ug/L			06/20/24 20:26	20
Ethylbenzene	85		20	ug/L			06/20/24 20:26	20
Toluene	ND		20	ug/L			06/20/24 20:26	20
Xylenes, Total	570		30	ug/L			06/20/24 20:26	20
2-Methylnaphthalene	ND		80	ug/L			06/20/24 20:26	20
Naphthalene	60		40	ug/L			06/20/24 20:26	20
1-Methylnaphthalene	ND		80	ug/L			06/20/24 20:26	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		06/20/24 20:26	20
4-Bromofluorobenzene (Surr)	102		70 - 130		06/20/24 20:26	20
Dibromofluoromethane (Surr)	102		70 - 130		06/20/24 20:26	20
Toluene-d8 (Surr)	103		70 - 130		06/20/24 20:26	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: State Com J6

Job ID: 885-5945-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-6969/3
Matrix: Water
Analysis Batch: 6969

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	ND		1.0	ug/L			06/18/24 23:27	1
Ethylbenzene	ND		1.0	ug/L			06/18/24 23:27	1
Toluene	ND		1.0	ug/L			06/18/24 23:27	1
Xylenes, Total	ND		1.5	ug/L			06/18/24 23:27	1
2-Methylnaphthalene	ND		4.0	ug/L			06/18/24 23:27	1
Naphthalene	ND		2.0	ug/L			06/18/24 23:27	1
1-Methylnaphthalene	ND		4.0	ug/L			06/18/24 23:27	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac		
%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		06/18/24 23:27	1		
4-Bromofluorobenzene (Surr)	112		70 - 130		06/18/24 23:27	1		
Dibromofluoromethane (Surr)	91		70 - 130		06/18/24 23:27	1		
Toluene-d8 (Surr)	98		70 - 130		06/18/24 23:27	1		

Lab Sample ID: STOBLK 885-6969/4
Matrix: Water
Analysis Batch: 6969

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	STOBLK	STOBLK	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	ND		1.0	ug/L			06/18/24 23:51	1
Ethylbenzene	ND		1.0	ug/L			06/18/24 23:51	1
Toluene	ND		1.0	ug/L			06/18/24 23:51	1
Xylenes, Total	ND		1.5	ug/L			06/18/24 23:51	1
2-Methylnaphthalene	ND		4.0	ug/L			06/18/24 23:51	1
Naphthalene	ND		2.0	ug/L			06/18/24 23:51	1
1-Methylnaphthalene	ND		4.0	ug/L			06/18/24 23:51	1
Surrogate	STOBLK	STOBLK	Limits	Prepared	Analyzed	Dil Fac		
%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		06/18/24 23:51	1		
4-Bromofluorobenzene (Surr)	109		70 - 130		06/18/24 23:51	1		
Dibromofluoromethane (Surr)	88		70 - 130		06/18/24 23:51	1		
Toluene-d8 (Surr)	98		70 - 130		06/18/24 23:51	1		

Lab Sample ID: LCS 885-6969/2
Matrix: Water
Analysis Batch: 6969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	20.1	19.6		ug/L		98	70 - 130
Toluene	20.2	22.4		ug/L		111	70 - 130
Surrogate	LCS	LCS	Limits				
%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	94		70 - 130				
4-Bromofluorobenzene (Surr)	112		70 - 130				
Dibromofluoromethane (Surr)	86		70 - 130				
Toluene-d8 (Surr)	100		70 - 130				

Eurofins Albuquerque

QC Sample Results

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 885-7118/5
 Matrix: Water
 Analysis Batch: 7118

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	ND		1.0	ug/L			06/20/24 16:20	1
Ethylbenzene	ND		1.0	ug/L			06/20/24 16:20	1
Toluene	ND		1.0	ug/L			06/20/24 16:20	1
Xylenes, Total	ND		1.5	ug/L			06/20/24 16:20	1
2-Methylnaphthalene	ND		4.0	ug/L			06/20/24 16:20	1
Naphthalene	ND		2.0	ug/L			06/20/24 16:20	1
1-Methylnaphthalene	ND		4.0	ug/L			06/20/24 16:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 130				06/20/24 16:20	1
4-Bromofluorobenzene (Surr)	94		70 - 130				06/20/24 16:20	1
Dibromofluoromethane (Surr)	102		70 - 130				06/20/24 16:20	1
Toluene-d8 (Surr)	96		70 - 130				06/20/24 16:20	1

Lab Sample ID: LCS 885-7118/3
 Matrix: Water
 Analysis Batch: 7118

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	20.1	22.8		ug/L		113	70 - 130
Toluene	20.2	22.5		ug/L		112	70 - 130
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				
4-Bromofluorobenzene (Surr)	95		70 - 130				
Dibromofluoromethane (Surr)	99		70 - 130				
Toluene-d8 (Surr)	97		70 - 130				

QC Association Summary

Client: Hilcorp Energy
Project/Site: State Com J6

Job ID: 885-5945-1

GC/MS VOA

Analysis Batch: 6969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5945-1	MW-1	Total/NA	Water	8260B	
885-5945-2	MW-2	Total/NA	Water	8260B	
885-5945-3	MW-3	Total/NA	Water	8260B	
MB 885-6969/3	Method Blank	Total/NA	Water	8260B	
STOBLK 885-6969/4	Method Blank	Total/NA	Water	8260B	
LCS 885-6969/2	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 7118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5945-4	RW-1	Total/NA	Water	8260B	
885-5945-5	RW-2	Total/NA	Water	8260B	
885-5945-6	RW-3	Total/NA	Water	8260B	
885-5945-7	RW-4	Total/NA	Water	8260B	
MB 885-7118/5	Method Blank	Total/NA	Water	8260B	
LCS 885-7118/3	Lab Control Sample	Total/NA	Water	8260B	

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Lab Chronicle

Client: Hilcorp Energy
 Project/Site: State Com J6

Job ID: 885-5945-1

Client Sample ID: MW-1
 Date Collected: 06/07/24 15:00
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-1
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	6969	CM	EET ALB	06/19/24 05:33

Client Sample ID: MW-2
 Date Collected: 06/07/24 15:30
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-2
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	6969	CM	EET ALB	06/19/24 05:58

Client Sample ID: MW-3
 Date Collected: 06/07/24 16:00
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-3
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	6969	CM	EET ALB	06/19/24 06:22

Client Sample ID: RW-1
 Date Collected: 06/07/24 13:00
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-4
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		10	7118	CM	EET ALB	06/20/24 19:13

Client Sample ID: RW-2
 Date Collected: 06/07/24 12:00
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-5
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	7118	CM	EET ALB	06/20/24 18:48

Client Sample ID: RW-3
 Date Collected: 06/07/24 13:40
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-6
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		10	7118	CM	EET ALB	06/20/24 19:37

Client Sample ID: RW-4
 Date Collected: 06/07/24 14:25
 Date Received: 06/11/24 06:35

Lab Sample ID: 885-5945-7
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		20	7118	CM	EET ALB	06/20/24 20:26

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: State Com J6

Job ID: 885-5945-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date																																
New Mexico	State	NM9425, NM0901	02-26-25																																
<p>The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.</p> <table border="1"> <thead> <tr> <th>Analysis Method</th> <th>Prep Method</th> <th>Matrix</th> <th>Analyte</th> </tr> </thead> <tbody> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>1-Methylnaphthalene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>2-Methylnaphthalene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>Benzene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>Ethylbenzene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>Naphthalene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>Toluene</td> </tr> <tr> <td>8260B</td> <td></td> <td>Water</td> <td>Xylenes, Total</td> </tr> </tbody> </table>				Analysis Method	Prep Method	Matrix	Analyte	8260B		Water	1-Methylnaphthalene	8260B		Water	2-Methylnaphthalene	8260B		Water	Benzene	8260B		Water	Ethylbenzene	8260B		Water	Naphthalene	8260B		Water	Toluene	8260B		Water	Xylenes, Total
Analysis Method	Prep Method	Matrix	Analyte																																
8260B		Water	1-Methylnaphthalene																																
8260B		Water	2-Methylnaphthalene																																
8260B		Water	Benzene																																
8260B		Water	Ethylbenzene																																
8260B		Water	Naphthalene																																
8260B		Water	Toluene																																
8260B		Water	Xylenes, Total																																
Oregon	NELAP	NM100001	02-26-25																																

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Login Sample Receipt Checklist

Client: Hilcorp Energy

Job Number: 885-5945-1

Login Number: 5945

List Source: Eurofins Albuquerque

List Number: 1

Creator: Proctor, Nancy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 444139

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 444139
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Report accepted for record.	3/11/2026
amaxwell	Discontinue sampling at wells MW-1, MW-2, MW-3, and RW-2. Site COCs have been in compliance with NMWQCC standards for at least 17 consecutive sampling events.	3/11/2026
amaxwell	Continue annual groundwater sampling of RW-1, RW-3, and RW-4. Once BTEX and naphthalene concentrations meet NMWQCC standards, the sampling frequency will be increased until compliance is confirmed for eight consecutive quarters.	3/11/2026
amaxwell	Continue gauging all Site wells for depth to groundwater and depth to PSH measurements on an annual basis and resume PSH removal via absorbent socks and hand bailing if rebound is observed.	3/11/2026