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April 24, 2024

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 First Quarter – Remediation System Operation and Monitoring Report
Standard #1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS1735235018
Abatement Plan Number: AP-126

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *2024 First Quarter - Remediation System Operation and Monitoring Report* summarizing remediation system performance during the first quarter of 2024 at the Standard #1 (Site, Figure 1). The duration of operation and monitoring activities included in this report is for the period from January 2, 2024 (system startup), through March 21, 2024.

This report was prepared following the approval from the New Mexico Oil Conservation Division (NMOCD) regarding the dual-phase extraction (DPE) remediation system described in the *Stage 2 Abatement Plan* submitted by LT Environmental, Inc. in September 2019. Although no formal conditions of approval (COAs) have been provided in response to the aforementioned report, this report includes the following information based on COAs issued for similar Sites:

- A summary of remediation activities during the quarter;
- The system run time summary (90% run time typically required);
- Total system flow and vacuum measurements;
- Individual well flow rates, photoionization detector (PID) measurements of volatile organic compounds (VOCs), vacuum measurements, and oxygen/carbon dioxide measurements via hand-held analyzers;
- The petroleum mass removal and fluid product recovery from the remediation system.

Per correspondence with the NMOCD in April 2024, the quarterly remediation summary reports also include data and summaries from groundwater sampling events conducted at the Site during each reporting period. Because groundwater sampling activities have been performed quarterly while the system was being procured and installed, this report summarizes groundwater data gathered between the fourth quarter of 2022 and the first quarter of 2024.

REMEDIATION SYSTEM DESCRIPTION

The remediation system at the Site includes a DPE system which uses a high vacuum rotary claw blower to apply vacuum to remediation wells (MW01, MW02, MW03, MW06, MW10, and MW15) that are connected to the blower via subsurface piping (Figure 2). The extracted air, petroleum

vapors, and fluids enter a vapor/liquid separator or "knock out" tank. Air and petroleum vapors are passed through the high vacuum extraction blower and discharged to the atmosphere via an exhaust stack. Separated liquid, which includes light non-aqueous phase liquids (LNAPL) and potentially impacted groundwater, is pumped to an aboveground storage tank for storage and off-site disposal. The system layout is depicted on Figure 3.

FIRST QUARTER 2024 OPERATION AND MAINTENANCE

Field data measurements were collected from the system daily for the first week of operation and then weekly thereafter for the remainder of the first quarter of January, February, and March 2024. Regular weekly system operations and maintenance (O&M) activities have been performed through the first quarter of 2024. Field forms completed during O&M visits are presented in Appendix A.

Since startup on January 2, 2024, all Site DPE wells were operated in order to recover LNAPL, draw down the groundwater table, and induce air flow in impacted soil zones. Between January 2 and March 21, 2024, the DPE system operated for 1,872 hours for a runtime efficiency of 99 percent (%). Appendix B presents photographs of the runtime meter for calculating the first quarter 2024 runtime efficiency. Table 1 presents the SVE system operational hours and calculated percent runtime.

During an O&M field visit in January of 2024, it was determined that excess liquid carryover through the knockout tank was occurring, causing recovered liquids to be processed through the blower. In order to minimize risk to the blower, the motor speed was temporarily slowed to decrease vacuum applied to the extraction wells. Additional demister material was added to the inside of the knockout tank and the motor speed was increased in March 2024 to maximize vacuum and associated liquid and vapor recovery. Field measurements collected during O&M events are summarized in Table 2.

Vapor Recovery

Initial influent vapor samples from the DPE system were collected on January 2, January 3, January 4, and January 5, 2024 using a high vacuum air sampling pump on the system inlet, after the manifold assembly, but prior to the liquid knock out tank. Influent vapor samples were collected weekly for the remainder of January and semi-monthly (twice per month) for the remainder of the first quarter of 2024. Samples were collected into 1-Liter Tedlar® bags and submitted to Eurofins Environment Testing (Eurofins) in Albuquerque, New Mexico for analysis of VOCs following United States Environmental Protection Agency (EPA) EPA Method 8260B, total petroleum hydrocarbons (TPH) following EPA Method 8015D, and fixed gas analysis of oxygen and carbon dioxide following Gas Processors Association (GPA) Method 2261. A summary of laboratory analytical results are summarized in Table 3, with complete laboratory analytical reports attached as Appendix C. Graphs 1 and 2 also present oxygen and carbon dioxide levels over time, respectively.

Vapor sample data and measured influent flow rates are used to estimate total mass recovered and total emissions generated by the DPE system (Table 4). Based on these estimates, 5,914 pounds (3.0 tons) of TPH have been removed by the system to date.

Liquid Recovery

Total liquid recovery volumes are measured using a totalizing flow metering device. Since startup of the system on January 2, 2024, through March 21, 2024, approximately 37,795 gallons of liquid have been recovered. The impacted groundwater and recovered LNAPL are emulsified and homogenously commingled enough during extraction that product thickness is unmeasurable in

the liquid recovery tank. Therefore, the estimated volume of LNAPL recovered is not measurable and not reported. Liquid recovery is summarized in Table 5.

GROUNDWATER MONITORING

Since October 2018, groundwater gauging and sampling activities have been conducted at the Site. Previous to this report, the last summary of groundwater analytical results was presented in the *Executive Summary – November 2022* document prepared by Ensolum and dated November 20, 2022. The *Executive Summary – November 2022* document summarized groundwater sampling activities and data that had been collected at the Site between October 2018 and September 2022. As such, this report summarizes quarterly groundwater sampling activities and data collected from the fourth quarter of 2022 to the first quarter 2024.

Fluid Level Measurements

Prior to purging and sampling, static depth to groundwater and total depth of each monitoring well was measured using an oil/water interface probe. Depth to phase-separated hydrocarbons (PSH, synonyms with LNAPL) was also recorded when present and a correction factor of 0.8 was applied to the calculated groundwater elevation to account for the depression of the water column caused by the presence of overlying PSH. The interface probe was decontaminated with Alconox® soap and rinsed with distilled water prior to each measurement to prevent cross contamination. Depth to groundwater, depth to PSH, and calculated groundwater elevations are summarized in Table 6. Potentiometric surface maps were drafted with groundwater elevations and PSH thickness measured during the fourth quarter 2022 through first quarter 2024 quarterly monitoring events (Figures 4 through 9).

In general, the presence of groundwater at the Site is highly variable and no apparent continuous groundwater aquifer has been observed during drilling and/or groundwater monitoring activities. Groundwater flow direction and gradient is generally difficult to interpret, as dry wells often exist around the perimeter of the Site, as well as between wells containing groundwater. Based on historical measurements, groundwater flow direction is variable across the Site, but is generally to the west-northwest.

Groundwater Sampling Activities and Analytical Results

Groundwater samples were collected for laboratory analysis from monitoring wells containing sufficient water to sample and that did not contain measurable PSH. Disposable polyvinyl chloride (PVC) bailers were used to collect groundwater samples due to limited water volume within several of the monitoring wells. Prior to collecting groundwater samples, Hilcorp purged a minimum of three casing volumes or until the well was bailed dry to ensure water from the adjacent formation, representative of actual aquifer conditions, was sampled. If a well was purged dry, the well was allowed to recharge before samples were collected. Water quality parameters including pH, electrical conductivity, and temperature were measured in each well using a multi-probe water quality field meter during purging.

Groundwater samples were collected into laboratory provided sample bottles and immediately placed on ice for preservation. Samples were submitted to Hall Environmental Analysis Laboratory (Hall) and/or Eurofins (formerly Hall) for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX). A summary of groundwater analytical results is presented in Table 7 and on Figure 10, with complete laboratory analytical reports attached as Appendix D.

DISCUSSIONS AND RECOMMENDATIONS

Bi-weekly (every other week) to monthly O&M visits and bi-monthly (every other month) sampling events will be performed by Ensolum and/or Hilcorp personnel to ensure the DPE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following quarterly report.

Reporting

Updated remediation reports will be prepared and submitted to the NMOCD on a quarterly basis within 15 days following the end of the quarter and will contain the following:

- A summary of remediation and monitoring activities during the period;
- System run-time summary;
- Petroleum hydrocarbon mass removal and fluid recovery from the remediation system;
- DPE volume liquid removal; and
- Groundwater monitoring results, when applicable.

We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this report, please contact the undersigned.

Sincerely,
Ensolum, LLC

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Attachments:

Figure 1	Site Location Map
Figure 2	Site Features
Figure 3	Dual Phase Extraction System Layout
Figure 4	Groundwater Elevation Map – Q4 2022
Figure 5	Groundwater Elevation Map – Q1 2023
Figure 6	Groundwater Elevation Map – Q2 2023
Figure 7	Groundwater Elevation Map – Q3 2023
Figure 8	Groundwater Elevation Map – Q4 2023
Figure 9	Groundwater Elevation Map – Q1 2024
Figure 10	Groundwater Analytical Results

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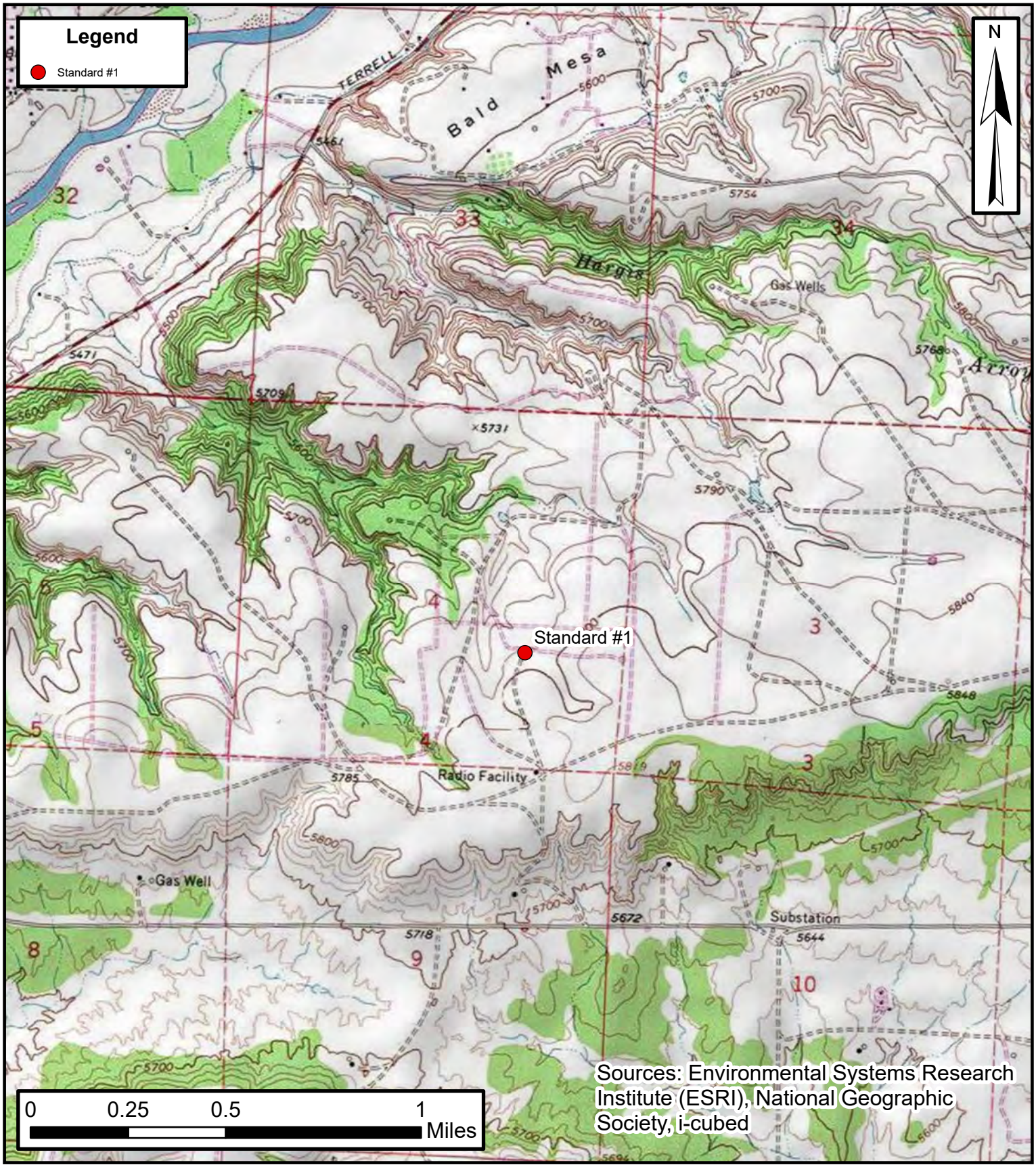
Figures



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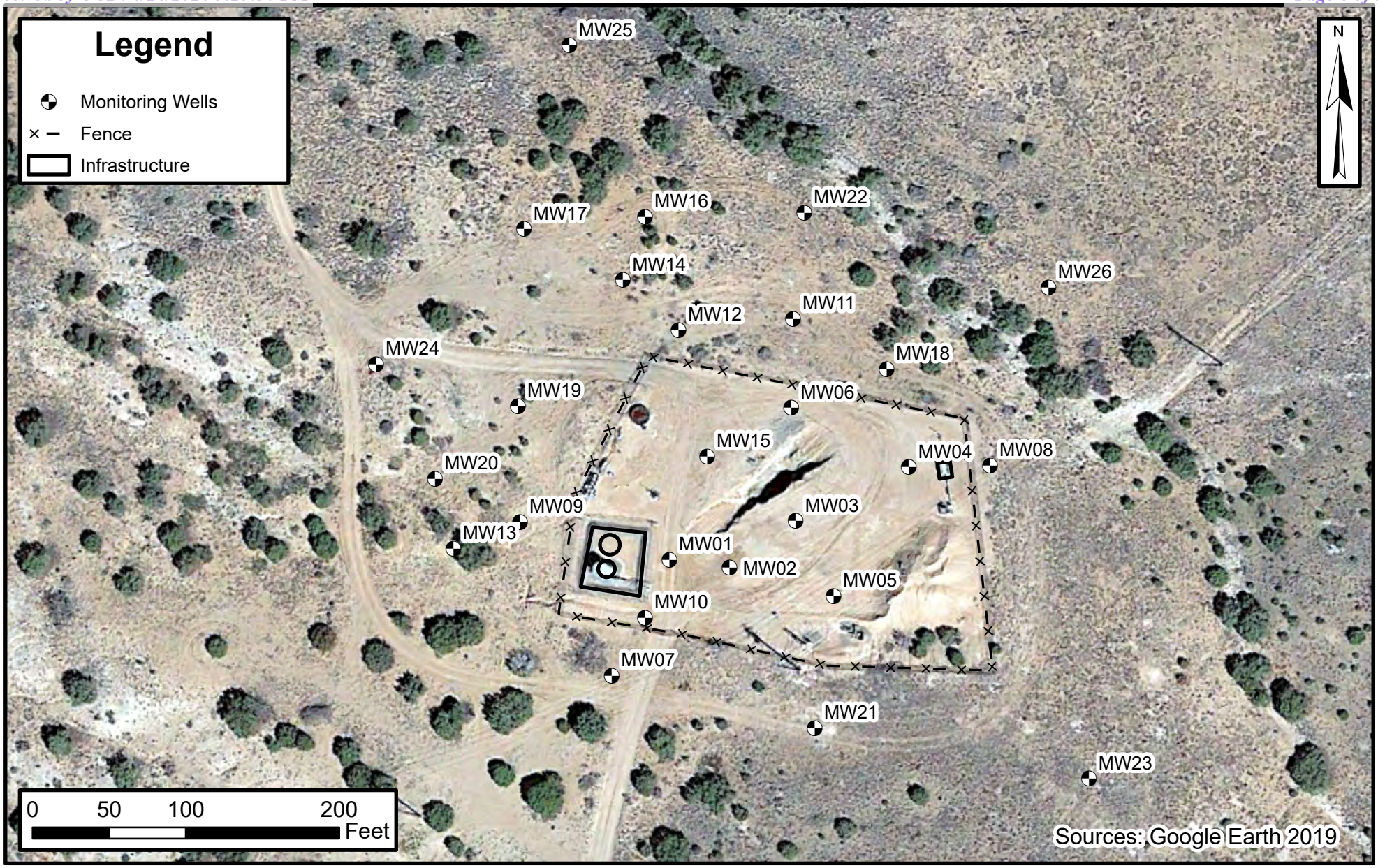
Site Location Map

Standard #1
Hilcorp Energy Company

36.75285, -108.099744
San Juan County, New Mexico

FIGURE
1



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Site Features

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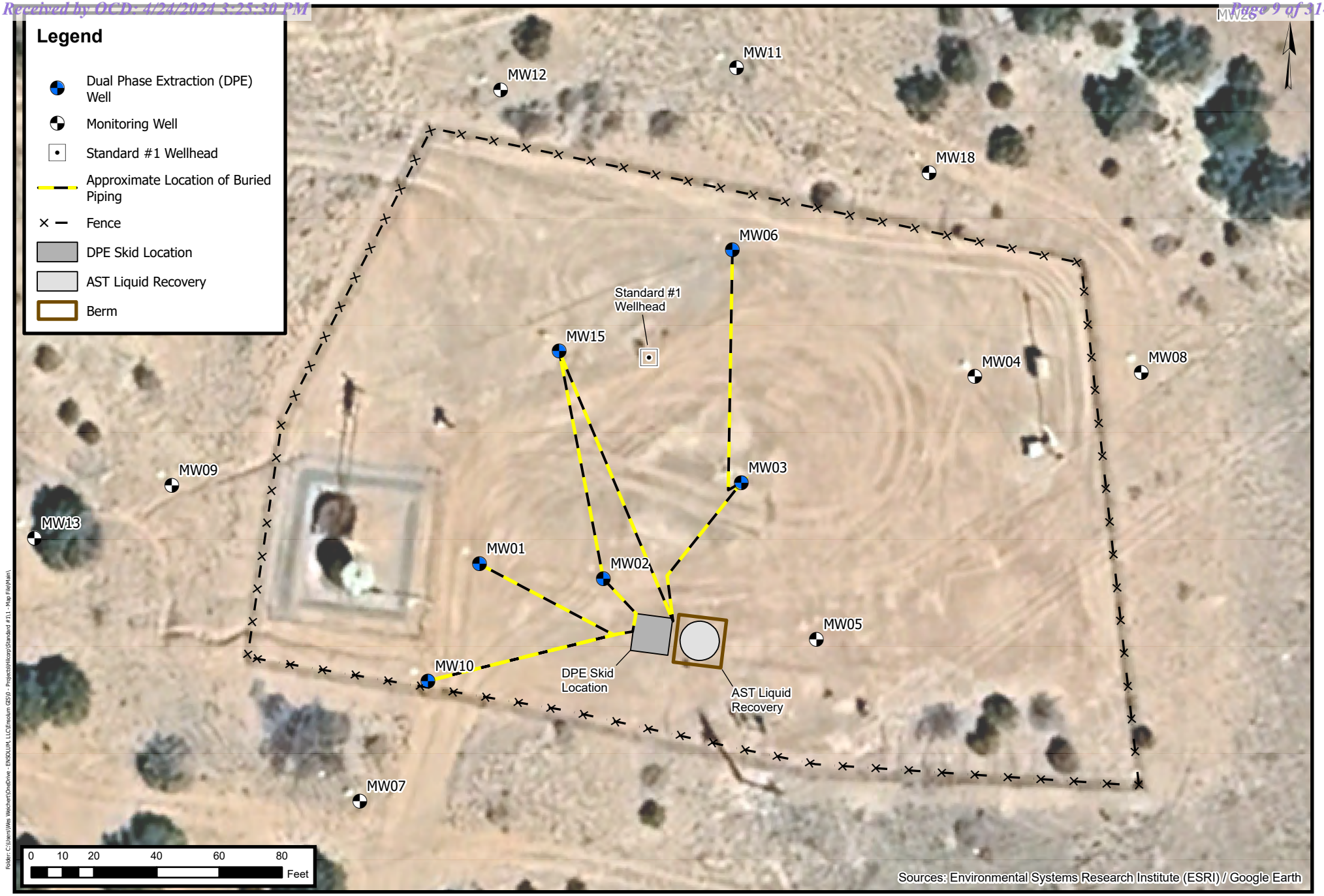
36.75285, -108.099744
San Juan County, New Mexico

FIGURE
2



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Dual Phase Extraction System Layout

Standard #1

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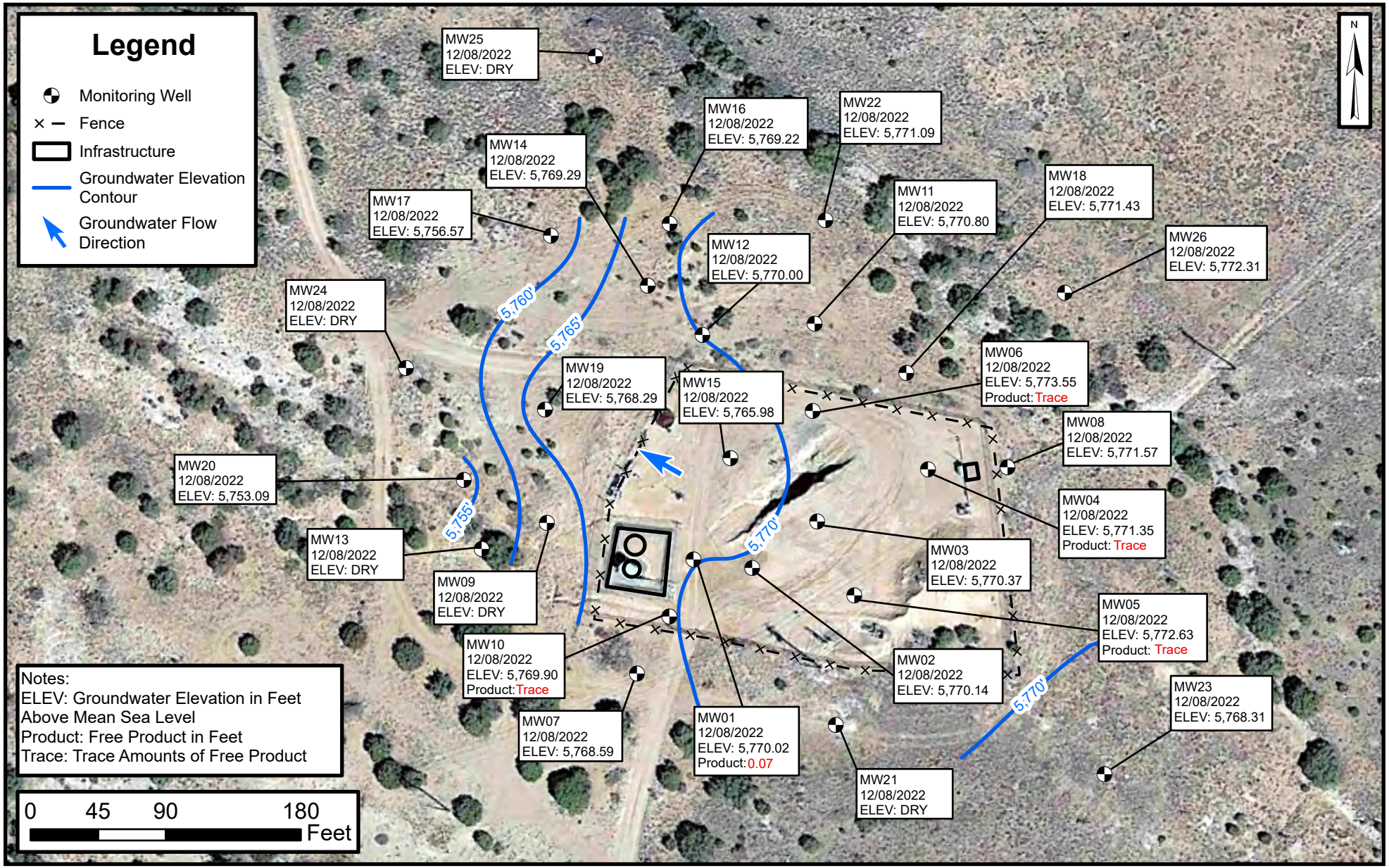
36.75285, -108.099744

San Juan County, New Mexico

FIGURE

3



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Groundwater Elevation Map - Q4 2022

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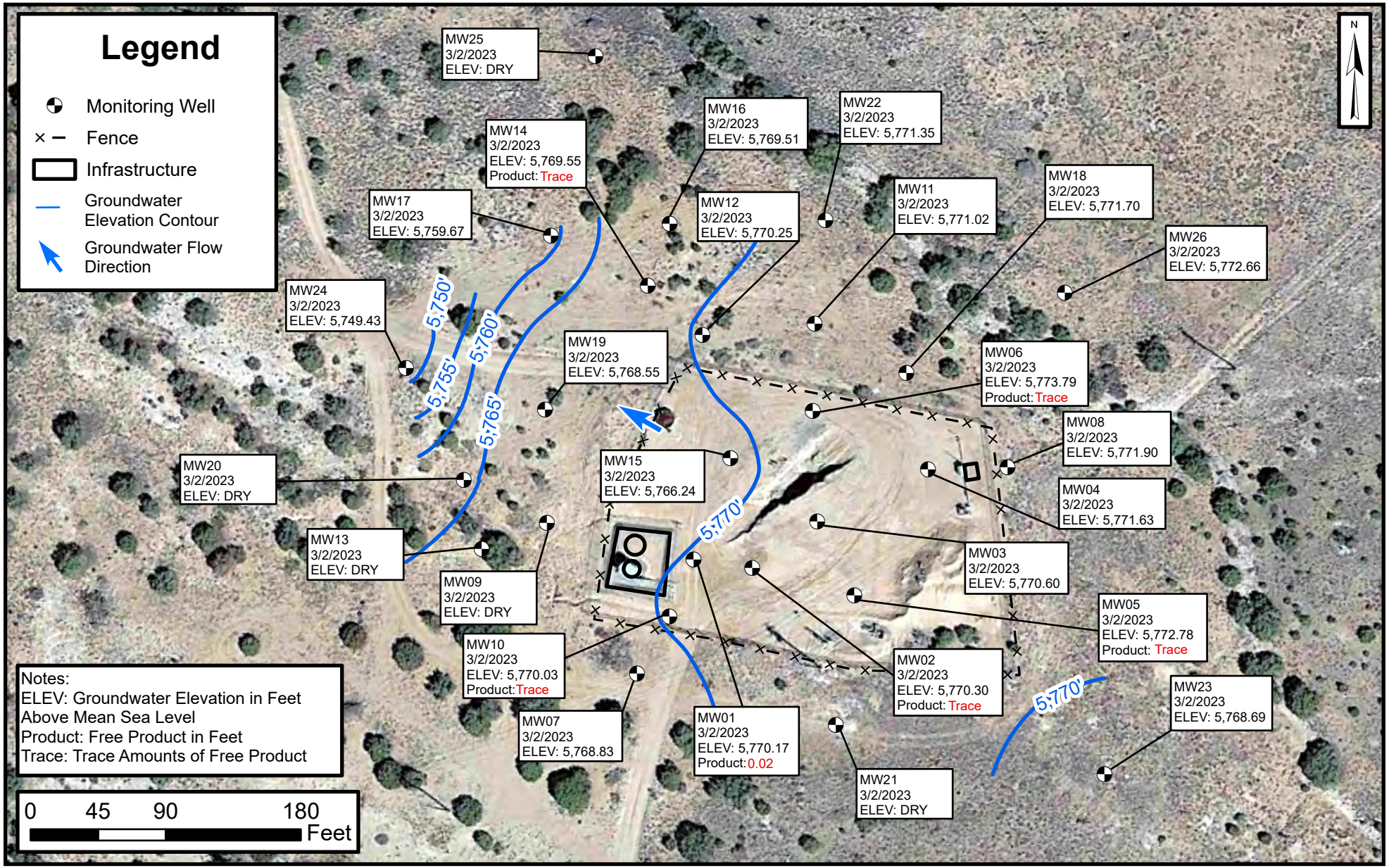
36.75285, -108.099744
San Juan County, New Mexico

FIGURE
4

Sources: Google Earth 2019



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Groundwater Elevation Map - Q1 2023

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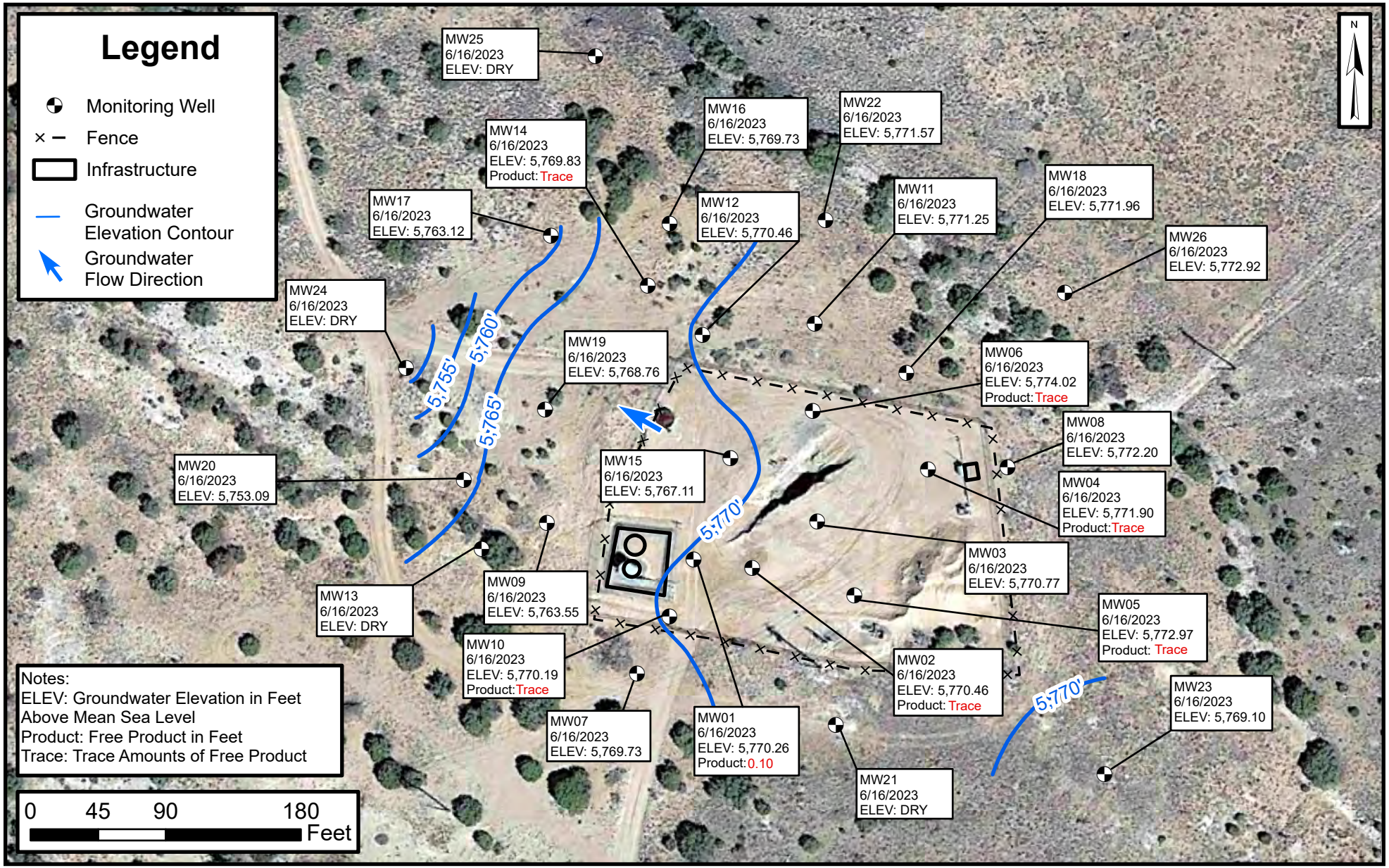
San Juan County, New Mexico

FIGURE
5

Sources: Google Earth 2019



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Groundwater Elevation Map - Q2 2023

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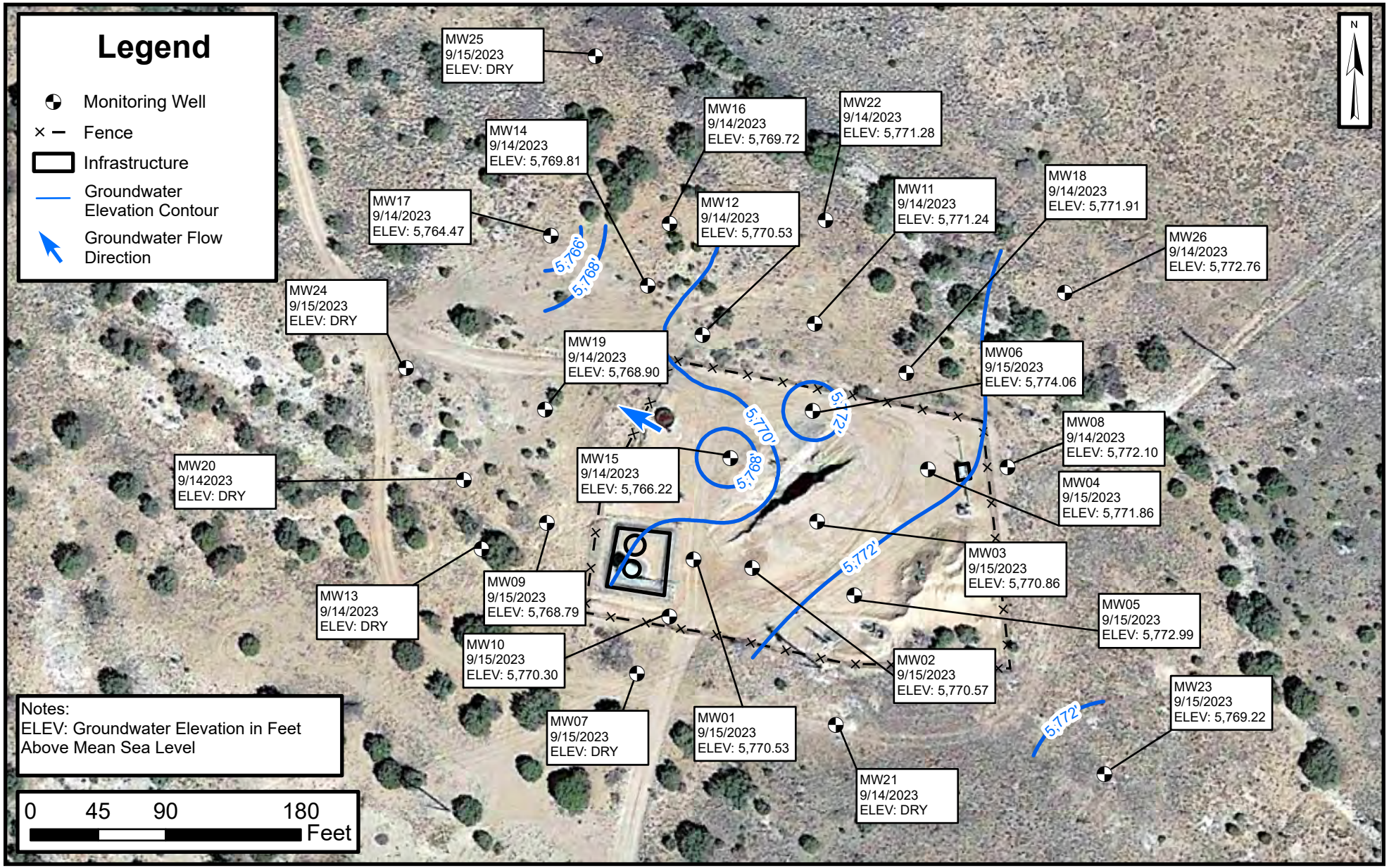
San Juan County, New Mexico

FIGURE
6

Sources: Google Earth 2019



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Groundwater Elevation Map - Q3 2023

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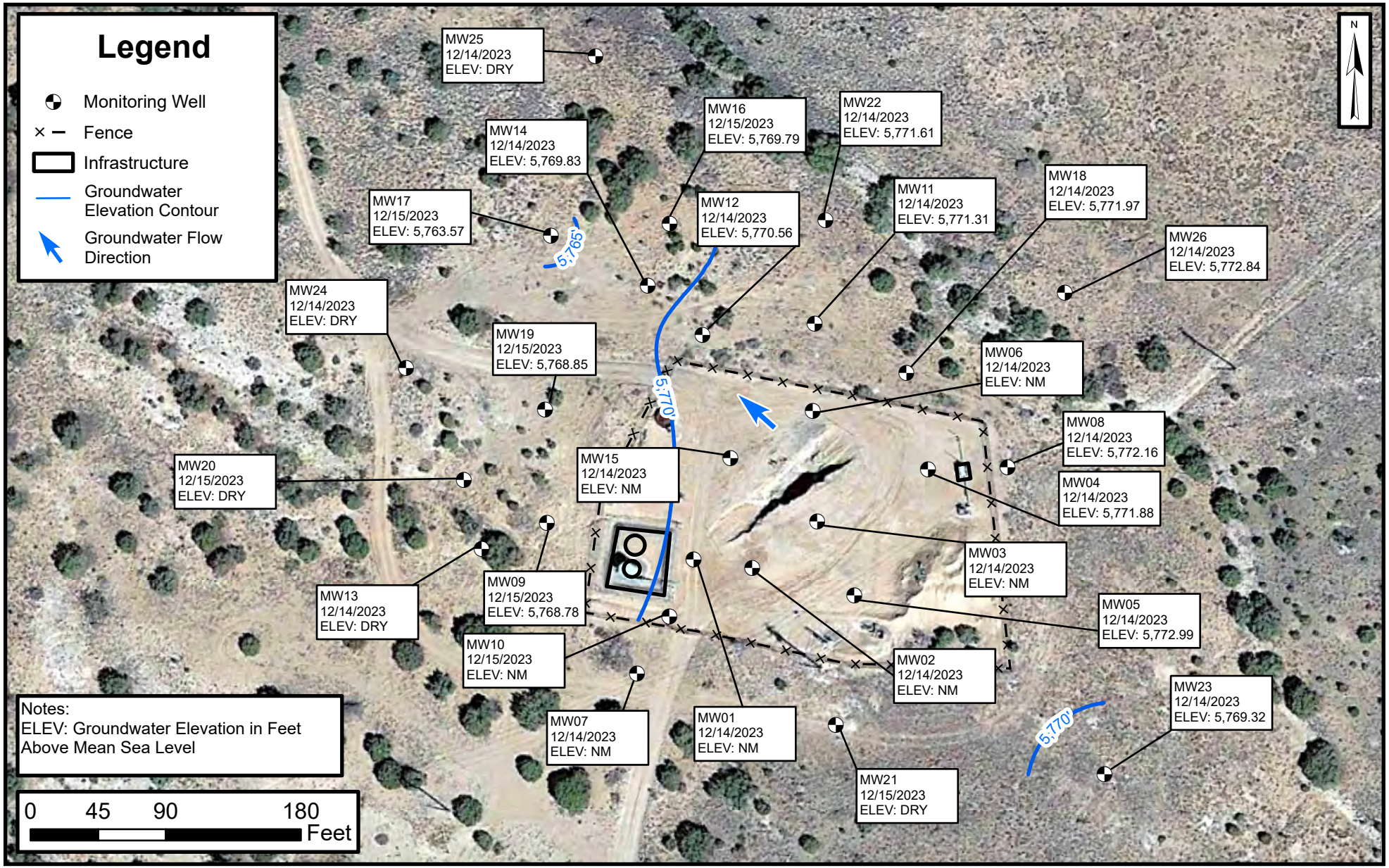
FIGURE
7

Sources: Google Earth 2019



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Groundwater Elevation Map - Q4 2023

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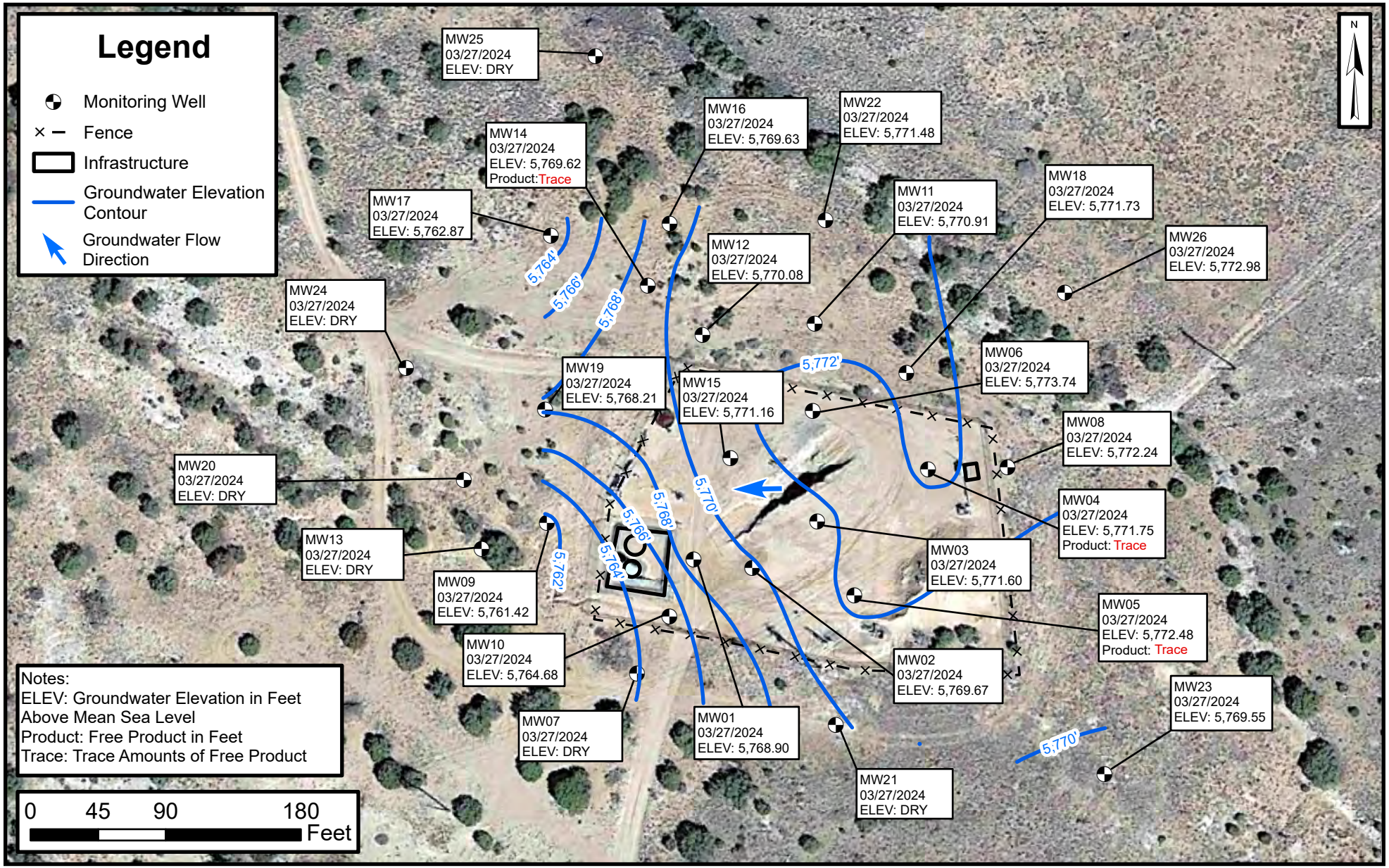
San Juan County, New Mexico

FIGURE
8

Sources: Google Earth 2019



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Groundwater Elevation Map - Q1 2024

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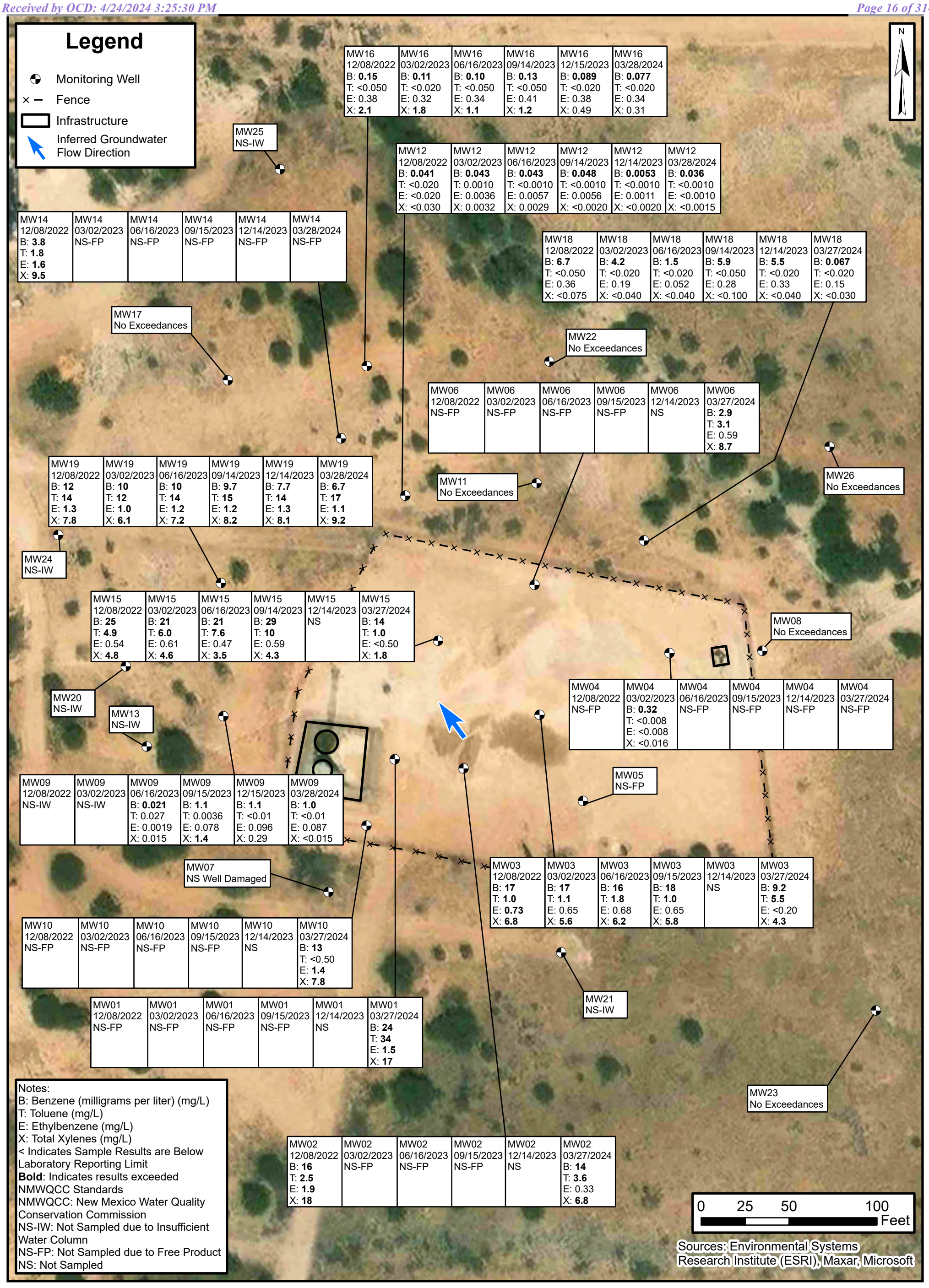
San Juan County, New Mexico

FIGURE
9

Sources: Google Earth 2019



Notes:
B: Benzene (milligrams per liter) (mg/L)
T: Toluene (mg/L)
E: Ethylbenzene (mg/L)
X: Total Xylenes (mg/L)
< Indicates Sample Results are Below Laboratory Reporting Limit
Bold: Indicates results exceeded NMWQCC Standards
NMWQCC: New Mexico Water Quality Conservation Commission
NS-IW: Not Sampled due to Insufficient Water Column
NS-FP: Not Sampled due to Free Product
NS: Not Sampled

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Groundwater Analytical Results

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San Juan County, New Mexico

FIGURE
10

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Tables & Graphs

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TABLE 1
DUAL PHASE EXTRACTION SYSTEM RUNTIME CALCULATIONS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Date/Time of Reading	System Hour Runtime	Run Time (%)	Cumulative Run Time (%)	Notes
1/2/2024	4	START UP		
1/3/2024	28	99%	99%	
1/4/2024	53	102%	101%	
1/5/2024	76	97%	99%	
1/11/2024	218	99%	99%	
1/12/2024	247	121%	101%	
1/18/2024	376	89%	97%	
1/24/2024	518	99%	97%	
2/1/2024	707	98%	98%	
2/8/2024	874	100%	98%	
2/15/2024	1,040	99%	98%	
2/21/2024	1,183	99%	98%	
3/1/2024	1,398	100%	98%	
3/7/2024	1,545	102%	99%	
3/14/2024	1,710	98%	99%	
3/21/2024	1,876	100%	99%	

Notes:

%: percent

Dashed line indicates quarter change

--: not applicable/not collected

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TABLE 2
DUAL PHASE EXTRACTION SYSTEM FIELD MEASUREMENTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

SVE Well ID	Date	PID (ppm)	Differential Pressure (IWC)	Flow Rate (acfm)	Flow Rate (scfm)[1]	Vacuum (IHG)	Vacuum (psi)	Oxygen (%)	Carbon Dioxide (%)
Influent, All Wells	1/2/2024	198	4.50	742	534	2.5	1.23	20.9	0.06
	1/3/2024	69	4.50	742	534	2.5	1.23	20.9	0.02
	1/4/2024	467	2.50	553	398	2.5	1.23	16.6	4.99
	1/5/2024	416	2.50	553	216	15.0	7.37	19.8	1.34
	1/11/2024	993	1.75	463	187	14.5	7.12	--	--
	1/18/2024	234	2.00	495	220	13.0	6.39	--	--
	1/24/2024	521	2.50	553	260	12.0	5.89	--	--
	2/1/2024	397	3.25	630	379	7.0	3.44	--	--
	2/8/2024	350	3.00	606	348	8.0	3.93	--	--
	2/15/2024	401	3.00	606	340	8.5	4.17	--	--
	2/21/2024	400	3.00	606	340	8.5	4.17	20.0	0.38
	3/1/2024	662	2.25	525	267	10.5	5.16	--	--
	3/7/2024	525	2.25	525	271	10.3	5.03	20.9	0.30
	3/14/2024	763	2.50	553	282	10.5	5.16	20.9	0.28
	3/21/2024	568	2.50	553	282	10.5	5.16	--	--
MW01	1/2/2024	102	--	--	44.0	1.0	0.49	20.9	0.08
	1/3/2024	87	--	--	14.0	1.0	0.49	20.9	0.04
	1/4/2024	--	--	--	93.0	13.5	6.63	--	--
	1/5/2024	403	--	--	53.0	13.0	6.39	20.7	0.58
	1/11/2024	135	0.95	85.2	42.3	11.0	5.40	--	--
	1/18/2024	655	0.08	24.7	11.6	12.0	5.89	--	--
	1/24/2024	1394	0.55	64.8	32.2	11.0	5.40	20.2	0.52
	2/1/2024	468	0.54	64.2	41.2	5.5	2.70	--	--
	2/8/2024	436	--	--	--	7.0	3.44	19.8	0.78
	2/15/2024	413	0.20	39.1	23.5	7.0	3.44	19.8	0.44
	2/21/2024	543	0.20	39.1	23.5	7.0	3.44	20.0	0.40
	3/1/2024	353	0.28	46.3	25.4	9.0	4.42	20.5	0.44
	3/7/2024	431	0.51	62.4	34.3	9.0	4.42	20.9	0.36
	3/14/2024	409	0.19	38.1	20.9	9.0	4.42	20.9	0.38
	3/21/2024	398	0.49	61.2	33.6	9.0	4.42	20.9	0.36
MW02	1/2/2024	102	--	--	20.0	1.0	0.49	20.9	0.02
	1/3/2024	240	--	--	25.0	1.0	0.49	20.9	0.06
	1/4/2024	--	--	--	86.0	13.5	6.63	--	--
	1/5/2024	243	--	--	84.0	12.5	6.14	20.6	0.82
	1/11/2024	392	0.80	78.2	38.8	11.0	5.40	--	--
	1/18/2024	335	1.05	89.6	42.1	12.0	5.89	--	--
	1/24/2024	710	0.75	75.7	38.6	10.5	5.16	20.7	0.52
	2/1/2024	179	0.15	33.9	21.2	6.0	2.95	--	--
	2/8/2024	380	--	--	--	7.3	3.56	20.7	0.54
	2/15/2024	232	0.21	40.1	23.6	7.5	3.68	20.3	0.32
	2/21/2024	175	0.15	33.9	20.4	7.0	3.44	20.6	0.18
	3/1/2024	315	0.56	65.4	35.9	9.0	4.42	20.9	0.36
	3/7/2024	396	0.64	69.9	38.4	9.0	4.42	20.9	0.24
	3/14/2024	412	0.64	69.9	38.4	9.0	4.42	20.9	0.20
	3/21/2024	408	0.61	68.3	37.5	9.0	4.42	20.9	0.18
MW03	1/2/2024	139	--	--	45.0	1.0	0.49	20.9	0.14
	1/3/2024	240	--	--	25.0	1.0	0.49	20.9	0.06
	1/4/2024	--	--	--	37.0	13.0	6.39	--	--
	1/5/2024	332	--	--	18.0	12.0	5.89	18.9	1.56
	1/11/2024	187	1.30	99.7	44.3	13.0	6.39	--	--
	1/18/2024	452	1.11	92.1	36.1	15.0	7.37	--	--
	1/24/2024	1775	0.62	68.8	30.6	13.0	6.39	19.2	1.26
	2/1/2024	644	0.24	42.8	24.1	8.5	4.17	--	--
	2/8/2024	325	--	--	--	9.5	4.67	19.0	1.30
	2/15/2024	235	0.23	41.9	21.9	10.0	4.91	20.3	0.28
	2/21/2024	498	--	--	--	--	--	19.1	0.72
	3/1/2024	404	0.13	31.5	14.8	12.0	5.89	19.7	1.04
	3/7/2024	721	0.41	56.0	27.1	11.5	5.65	20.2	0.66
	3/14/2024	687	0.35	51.7	25.0	11.5	5.65	20.4	0.44
	3/21/2024	627	0.36	52.5	25.4	11.5	5.65	20.3	0.45

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TABLE 2
DUAL PHASE EXTRACTION SYSTEM FIELD MEASUREMENTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

SVE Well ID	Date	PID (ppm)	Differential Pressure (IWC)	Flow Rate (acfm)	Flow Rate (scfm)[1]	Vacuum (IHG)	Vacuum (psi)	Oxygen (%)	Carbon Dioxide (%)
MW06	1/2/2024	153	--	--	48.0	1.0	0.49	20.9	0.14
	1/3/2024	161	--	--	23.0	1.0	0.49	20.9	0.04
	1/4/2024	--	--	--	48.0	12.0	5.89	--	--
	1/5/2024	295	--	--	26.0	11.5	5.65	19.1	1.41
	1/11/2024	323	1.18	95.0	47.1	11.0	5.40	--	--
	1/18/2024	35	1.12	92.5	42.3	12.5	6.14	--	--
	1/24/2024	439	0.40	55.3	28.2	10.5	5.16	20.9	0.56
	2/1/2024	245	0.17	36.0	23.1	5.5	2.70	--	--
	2/8/2024	220	--	--	--	7.0	3.44	20.9	0.42
	2/15/2024	120	0.15	33.9	20.4	7.0	3.44	20.9	0.12
	2/21/2024	319	0.22	41.0	24.4	7.2	3.54	20.6	0.20
	3/1/2024	121	0.04	17.5	9.6	9.0	4.42	20.9	0.24
	3/7/2024	314	0.65	70.5	38.7	9.0	4.42	20.9	0.16
	3/14/2024	402	0.30	47.9	26.3	9.0	4.42	20.9	0.20
	3/21/2024	372	0.27	45.4	25.5	8.5	4.17	20.9	0.15
MW10	1/2/2024	104	--	--	44.0	1.0	0.49	20.9	0.08
	1/3/2024	92	--	--	16.0	1.0	0.49	20.9	0.02
	1/4/2024	--	--	--	85.0	14.0	6.88	--	--
	1/5/2024	147	--	--	69.0	13.5	6.63	20.9	0.36
	1/11/2024	59	0.88	82	43.9	9.5	4.67	--	--
	1/18/2024	256	0.77	77	35.1	12.5	6.14	--	--
	1/24/2024	7	0.62	69	34.2	11.0	5.40	20.9	0.00
	2/1/2024	435	0.21	40	26.2	5.0	2.46	--	--
	2/8/2024	381	--	--	--	7.0	3.44	20.9	0.32
	2/15/2024	205	0.05	20	11.8	7.0	3.44	20.6	0.18
	2/21/2024	204	0.03	15	9.1	7.0	3.44	20.7	0.16
	3/1/2024	91	0.12	30	16.6	9.0	4.42	20.9	0.12
	3/7/2024	60	0.34	51	28.0	9.0	4.42	20.9	0.18
	3/14/2024	75	0.57	66	36.2	9.0	4.42	20.9	0.16
	3/21/2024	77	0.48	61	33.2	9.0	4.42	20.9	0.13
MW15	1/2/2024	126	--	--	46.0	1.0	0.49	20.9	0.12
	1/3/2024	125	--	--	20.0	1.0	0.49	20.9	0.02
	1/4/2024	--	--	--	45.0	11.5	5.65	--	--
	1/5/2024	138	--	--	43.0	11.5	5.65	20.9	0.10
	1/11/2024	Frozen							
	1/18/2024	124	3.78	170.0	79.9	12.0	5.89	--	--
	1/24/2024	425	0.18	37.1	20.8	8.5	4.17	20.9	0.18
	2/1/2024	34	0.12	30.3	19.0	6.0	2.95	--	--
	2/8/2024	90	--	--	--	5.0	2.43	20.9	0.06
	2/15/2024	25	0.05	19.5	11.8	7.0	3.44	20.9	0.08
	2/21/2024	57	--	--	--	--	--	20.9	0.08
	3/1/2024	129	0.07	23.1	12.7	9.0	4.42	20.9	0.00
	3/7/2024	114	0.16	35.0	19.2	9.0	4.42	20.9	0.00
	3/14/2024	130	0.13	31.5	17.3	9.0	4.42	20.9	0.00
	3/21/2024	122	0.13	31.5	17.3	9.0	4.42	20.9	0.00

Notes:

(1) Individual Well Flow Rates in scfm estimated based on rotometer readings from 1/2/24 to 1/5/24
IHG: inches of mercury
PID: photoionization detector
ppm: parts per million
acfm: actual cubic feet per minute
scfm: standard cubic feet per minute
%: percent
--: not measured

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TABLE 3
DUAL PHASE EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
1/2/2024	198	0.58	2.8	0.42	8.9	170	21.64	0.09
1/3/2024	69	0.21	1.2	0.24	5.0	69	21.71	0.06
1/4/2024	467	29	40	<5.0	18	3,400	17.40	4.80
1/5/2024	416	18	26	<5.0	8.7	2,300	20.83	1.26
1/12/2024(1)	993	22	42	<5.0	56	6,500	20.53	1.49
1/18/2024	234	21	28	<5.0	10	2,700	21.30	0.42
1/24/2024	523	22	40	<5.0	30	4,400	21.19	0.57
2/8/2024	350	19	31	<5.0	34	2,200	21.33	0.51
2/21/2024	400	13	18	<2.0	18	2,900	19.74	0.40
3/7/2024	525	14	28	<5.0	36	2,100	21.91	0.30
3/21/2024	568	15	27	1.1	34	2,900	21.57	0.29

Notes:

GRO: gasoline range organics
µg/L: microgram per liter
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
%: percent
--: not sampled
(1) PID reading is from 1/11/2024

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TABLE 4
DUAL PHASE EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Laboratory Analysis

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
1/2/2024	198	0.58	2.8	0.42	8.9	170
1/3/2024	69	0.21	1.2	0.24	5.0	69
1/4/2024	467	29	40	<5.0	18	3,400
1/5/2024	416	18	26	<5.0	8.7	2,300
1/12/2024(1)	993	22	42	<5.0	56	6,500
1/18/2024	234	21	28	<5.0	10	2,700
1/24/2024	523	22	40	<5.0	30	4,400
2/8/2024	350	19	31	<5.0	34	2,200
2/21/2024	400	13	18	<2.0	18	2,900
3/7/2024	525	14	28	<5.0	36	2,100
3/21/2024	568	15	27	1.1	34	2,900
Average	431	16	26	4	24	2,694

Vapor Extraction Summary

Date	Flow Rate (scfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
1/2/2024	534	0	0	0.0012	0.0056	0.0008	0.0178	0.34
1/3/2024	534	762,552	762,552	0.0008	0.0040	0.0007	0.0139	0.24
1/4/2024	398	1,347,612	585,060	0.0217	0.0307	0.0039	0.0171	2.58
1/5/2024	216	1,648,284	300,672	0.0190	0.0267	0.0040	0.0108	2.30
1/12/2024(1)	187	3,569,148	1,920,864	0.0140	0.0238	0.0035	0.0226	3.08
1/18/2024	220	5,271,948	1,702,800	0.0177	0.0288	0.0041	0.0272	3.78
1/24/2024	260	7,487,148	2,215,200	0.0209	0.0331	0.0049	0.0194	3.45
2/8/2024	340	14,749,548	7,262,400	0.0261	0.0451	0.0064	0.0407	4.20
2/21/2024	340	21,055,188	6,305,640	0.0203	0.0312	0.0045	0.0331	3.24
3/7/2024	271	26,939,682	5,884,494	0.0137	0.0233	0.0035	0.0274	2.53
3/21/2024	282	32,540,202	5,600,520	0.01529	0.0290	0.00322	0.0369	2.64
			Average	0.0155	0.026	0.0036	0.024	2.58

Mass Recovery

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
1/2/2024	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1/3/2024	28	24	0.0	0.1	0.0	0.3	5.7	0.0
1/4/2024	53	25	0.5	0.8	0.1	0	63	0.03
1/5/2024	76	23	0.4	0.6	0.1	0.3	53	0.03
1/12/2024(1)	247	171	2.4	4.1	0.6	4	527	0.26
1/18/2024	376	129	2.3	3.7	0.5	4	488	0.24
1/24/2024	518	142	3.0	4.7	0.7	2.8	490	0.25
2/8/2024	874	356	9.3	16	2.3	14	1,494	0.75
2/21/2024	1183	309	6.29	9.6	1.4	10	1,002	0.50
3/7/2024	1545	362	4.95	8.4	1.3	10	917	0.46
3/21/2024	1876	331	5.06	9.6	1.06	12.2	873	0.44
		Total Mass Recovery to Date	34	58	8	58	5,914	3.0

Notes:

cf: cubic feet
cfm: cubic feet per minute
µg/L: micrograms per liter
lb/hr: pounds per hour
--: not sampled
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
Laboratory detection limit used to estimate mass removal
(1) PID reading and flow rate are from 1/11/2024

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TABLE 5
LIQUID RECOVERY
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Date/Time	Hour Meter Reading	Flow Meter Reading (gal)	Gallons Recovered this Period	Cumulative Volume Recovered (gal)	Time Period (hr:min:sec)	Time Period (min)	Recovery Rate		Notes
							(gpm)	(gal/day)	
1/11/24 13:15	219	2,648	0	0	--	--	--	--	
1/18/24 14:05	376	8,518	5,870	5,870	168:50:00	10,130	0.58	834	
1/24/24 12:30	518	12,337	3,819	9,689	142:25:00	8,545	0.45	644	
2/1/24 11:00	707	14,170	1,834	11,522	190:30:00	11,430	0.16	231	
2/8/24 10:39	874	17,328	3,158	14,680	167:39:00	10,059	0.31	452	
2/15/24 10:40	1,040	21,029	3,701	18,381	168:01:00	10,081	0.37	529	
2/21/24 10:05	1,183	23,866	2,837	21,218	143:25:00	8,605	0.33	475	
3/1/24 13:20	1,399	28,034	4,168	25,385	219:15:00	13,155	0.32	456	
3/7/24 14:50	1,545	32,076	4,042	29,428	145:30:00	8,730	0.46	667	
3/14/24 13:05	1,710	36,362	4,286	33,713	166:15:00	9,975	0.43	619	
3/21/24 10:02	1,876	40,443	4,082	37,795	164:57:00	9,897	0.41	594	

Notes:

bbl: barrel
ft: feet
gal: gallon
gal/day: gallon per day
gpm: gallon per minute
hr: hour
in: inch
min: minute
sec: second
Dashed line indicated quarter change
--: not applicable

Total Quantity of Liquid Removed:	37,795	Gal
	900	bbl

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW01	5,789.08	10/22/2018	20.80	20.97	0.17	5,768.25
		3/29/2019	20.69	21.35	0.66	5,768.26
		6/28/2019	20.70	21.44	0.74	5,768.23
		9/17/2019	20.64	20.83	0.19	5,768.40
		12/17/2019	20.50	20.89	0.39	5,768.50
		3/12/2020	20.49	20.76	0.27	5,768.54
		6/25/2020	20.39	20.65	0.26	5,768.64
		9/23/2020	20.19	20.46	0.27	5,768.84
		3/21/2021	20.11	20.20	0.09	5,768.95
		6/14/2021	Trace	20.18	Trace	5,768.90
		9/20/2021	--	19.62	--	5,769.46
		12/2/2021	Trace	19.50	Trace	5,769.58
		3/1/2022	Trace	19.62	Trace	5,769.46
		6/7/2022	Trace	19.39	Trace	5,769.69
		9/29/2022	19.08	19.10	0.02	5,770.00
		12/8/2022	19.05	19.12	0.07	5,770.02
		3/2/2023	18.91	18.93	0.02	5,770.17
		6/16/2023	18.80	18.90	0.10	5,770.26
		9/15/2023	Trace	18.55	Trace	5,770.53
		12/14/2023	--	--	--	--
		3/27/2024	--	20.18	--	5,768.90
MW02	5,789.36	10/22/2018	--	21.12	--	5,768.24
		3/29/2019	20.85	21.11	0.26	5,768.46
		6/28/2019	20.95	21.30	0.35	5,768.34
		9/17/2019	20.80	20.85	0.05	5,768.55
		12/17/2019	--	20.74	--	5,768.62
		3/12/2020	--	20.65	--	5,768.71
		6/25/2020	--	20.58	--	5,768.78
		9/23/2020	--	20.43	--	5,768.93
		3/31/2021	--	20.29	--	5,769.07
		6/14/2021	Trace	20.21	Trace	5,769.15
		9/20/2021	--	19.77	--	5,769.59
		12/3/2021	--	19.68	--	5,769.68
		3/1/2022	--	19.83	--	5,769.53
		6/7/2022	Trace	19.56	Trace	5,769.80
		9/29/2022	--	19.26	--	5,770.10
		12/8/2022	--	19.22	--	5,770.14
		3/2/2023	Trace	19.06	Trace	5,770.30
		6/16/2023	Trace	18.90	Trace	5,770.46
		9/15/2023	Trace	18.79	Trace	5,770.57
		12/14/2023	--	--	--	--
		3/27/2024	--	19.69	--	5,769.67

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW03	5,792.06	10/22/2018	--	DRY	--	DRY
		3/29/2019	--	30.90	--	5,761.16
		6/28/2019	--	32.14	--	5,759.92
		9/17/2019	--	27.32	--	5,764.74
		12/17/2019	--	23.75	--	5,768.31
		3/12/2020	--	23.40	--	5,768.66
		6/25/2020	--	23.25	--	5,768.81
		9/23/2020	--	23.08	--	5,768.98
		3/31/2021	--	22.81	--	5,769.25
		6/14/2021	--	22.61	--	5,769.45
		9/24/2021	22.24	22.25	0.01	5,769.82
		12/3/2021	--	22.17	--	5,769.89
		3/1/2022	--	22.30	--	5,769.76
		6/7/2022	--	22.04	--	5,770.02
		9/29/2022	--	21.71	--	5,770.35
		12/8/2022	--	21.69	--	5,770.37
		3/2/2023	--	21.46	--	5,770.60
		6/16/2023	--	21.29	--	5,770.77
		9/15/2023	--	21.20	--	5,770.86
		12/14/2023	--	--	--	--
		3/27/2024	--	20.46	--	5,771.60
MW04	5,792.35	10/22/2018	--	31.80	--	5,760.55
		3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	31.88	--	5,760.47
		12/17/2019	--	31.87	--	5,760.48
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	31.89	--	5,760.46
		9/23/2020	--	30.99	--	5,761.36
		3/31/2021	--	28.31	--	5,764.04
		6/14/2021	--	26.98	--	5,765.37
		9/24/2021	--	24.85	--	5,767.50
		12/3/2021	--	22.12	--	5,770.23
		3/1/2022	--	22.52	--	5,769.83
		6/7/2022	--	21.38	--	5,770.97
		9/29/2022	--	21.13	--	5,771.22
		12/8/2022	Trace	21.00	Trace	5,771.35
		3/2/2023	--	20.72	--	5,771.63
		6/16/2023	Trace	20.45	Trace	5,771.90
		9/15/2023	--	20.49	--	5,771.86
		12/14/2023	--	20.47	--	5,771.88
		3/27/2024	Trace	20.60	Trace	5,771.75

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW05	5,792.60	10/22/2018	--	28.39	--	5,764.21
		3/29/2019	--	24.65	--	5,767.95
		6/28/2019	--	24.53	--	5,768.07
		9/17/2019	--	21.41	--	5,771.19
		12/17/2019	--	21.25	--	5,771.35
		3/12/2020	--	21.10	--	5,771.50
		6/25/2020	--	21.13	--	5,771.47
		9/23/2020	--	20.93	--	5,771.67
		3/31/2021	--	20.76	--	5,771.84
		6/14/2021	--	20.61	--	5,771.99
		9/24/2021	--	20.37	--	5,772.23
		12/3/2021	--	20.41	--	5,772.19
		3/1/2022	--	20.58	--	5,772.02
		6/7/2022	Trace	20.24	Trace	5,772.36
		9/29/2022	Trace	20.02	Trace	5,772.58
		12/8/2022	Trace	19.97	Trace	5,772.63
		3/2/2023	Trace	19.82	Trace	5,772.78
		6/16/2023	Trace	19.63	Trace	5,772.97
		9/15/2023	--	19.61	--	5,772.99
		12/14/2023	--	19.61	--	5,772.99
		3/27/2024	Trace	20.12	Trace	5,772.48
MW06	5,792.31	10/22/2018	24.08	24.48	0.40	5,768.15
		3/29/2019	23.55	24.00	0.45	5,768.67
		6/28/2019	23.72	23.95	0.23	5,768.54
		9/17/2019	20.67	20.75	0.08	5,771.62
		12/17/2019	20.61	20.62	0.01	5,771.70
		3/12/2020	--	20.43	--	5,771.88
		6/25/2020	--	20.36	--	5,771.95
		9/23/2020	--	20.16	--	5,772.15
		3/31/2021	--	19.89	--	5,772.42
		6/14/2021	Trace	19.63	Trace	5,772.68
		9/24/2021	--	19.27	--	5,773.04
		12/3/2021	--	19.27	--	5,773.04
		3/1/2022	--	19.43	--	5,772.88
		6/7/2022	--	19.11	--	5,773.20
		9/29/2022	Trace	18.80	Trace	5,773.51
		12/8/2022	Trace	18.76	Trace	5,773.55
		3/2/2023	Trace	18.52	Trace	5,773.79
		6/16/2023	Trace	18.29	Trace	5,774.02
		9/15/2023	--	18.25	--	5,774.06
		12/14/2023	--	--	--	--
		3/27/2024	--	18.57	--	5,773.74

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW07	5,791.15	10/22/2018	--	DRY	--	DRY
		3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	DRY	--	DRY
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	DRY	--	DRY
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	21.80	--	5,769.35
		12/8/2022	--	22.56	--	5,768.59
		3/2/2023	--	22.32	--	5,768.83
		6/16/2023	--	21.42	--	5,769.73
		9/15/2023	--	DRY	--	DRY
		12/14/2023	--	--	--	--
		3/27/2024	--	--	--	--
MW08	5,792.42	10/22/2018	--	DRY	--	DRY
		3/29/2019	--	DRY	--	DRY
		6/28/2019	--	24.07	--	5,768.35
		9/17/2019	--	23.81	--	5,768.61
		12/17/2019	--	23.42	--	5,769.00
		3/12/2020	--	23.37	--	5,769.05
		6/25/2020	--	23.28	--	5,769.14
		9/23/2021	--	22.88	--	5,769.54
		3/31/2021	--	22.14	--	5,770.28
		6/14/2021	--	21.67	--	5,770.75
		9/24/2021	--	21.52	--	5,770.90
		12/2/2021	--	21.76	--	5,770.66
		3/1/2022	--	21.81	--	5,770.61
		6/7/2022	--	21.17	--	5,771.25
		9/29/2022	--	21.02	--	5,771.40
		12/8/2022	--	20.85	--	5,771.57
		3/2/2023	--	20.52	--	5,771.90
		6/16/2023	--	20.22	--	5,772.20
		9/14/2023	--	20.32	--	5,772.10
		12/14/2023	--	20.26	--	5,772.16
		3/27/2024	--	20.18	--	5,772.24

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW09	5,786.16	10/22/2018	--	DRY	--	DRY
		3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	DRY	--	DRY
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	DRY	--	DRY
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	DRY	--	DRY
		12/8/2022	--	DRY	--	DRY
		3/2/2023	--	DRY	--	DRY
		6/16/2023	--	22.61	--	5,763.55
		9/15/2023	--	17.37	--	5,768.79
		12/15/2023	--	17.38	--	5,768.78
		3/28/2024	--	24.74	--	5,761.42
MW10	5,789.30	10/22/2018	--	32.26	--	5,757.04
		3/29/2019	21.73	22.04	0.31	5,767.51
		6/28/2019	21.55	21.94	0.39	5,767.67
		9/17/2019	21.23	21.55	0.32	5,768.01
		12/17/2019	20.88	21.71	0.83	5,768.25
		3/12/2020	20.81	21.68	0.87	5,768.32
		6/25/2020	20.75	21.43	0.68	5,768.41
		9/23/2020	20.51	21.03	0.52	5,768.69
		3/31/2021	20.42	20.63	0.21	5,768.84
		6/14/2021	Trace	20.71	Trace	5,768.59
		9/24/2021	--	19.92	--	5,769.38
		12/3/2021	--	19.80	--	5,769.50
		3/1/2022	--	19.95	--	5,769.35
		6/7/2022	Trace	19.70	Trace	5,769.60
		9/29/2022	Trace	19.43	Trace	5,769.87
		12/8/2022	Trace	19.40	Trace	5,769.90
		3/2/2023	Trace	19.27	Trace	5,770.03
		6/16/2023	Trace	19.11	Trace	5,770.19
		9/15/2023	--	19.00	--	5,770.30
		12/15/2023	--	--	--	--
		3/28/2024	--	24.62	--	5,764.68

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW11	5,787.99	10/22/2018	--	19.89	--	5,768.10
		3/29/2019	--	19.63	--	5,768.36
		6/28/2019	--	19.37	--	5,768.62
		9/17/2019	--	19.31	--	5,768.68
		12/17/2019	--	19.17	--	5,768.82
		3/12/2020	--	18.91	--	5,769.08
		6/25/2020	--	18.85	--	5,769.14
		9/23/2020	--	18.71	--	5,769.28
		3/31/2021	--	18.40	--	5,769.59
		6/14/2021	--	18.06	--	5,769.93
		9/24/2021	--	17.72	--	5,770.27
		12/2/2021	--	17.79	--	5,770.20
		3/1/2022	--	17.90	--	5,770.09
		6/7/2022	--	17.55	--	5,770.44
		9/29/2022	--	17.27	--	5,770.72
		12/8/2022	--	17.19	--	5,770.80
		3/2/2023	--	16.97	--	5,771.02
		6/16/2023	--	16.74	--	5,771.25
		9/14/2023	--	16.75	--	5,771.24
		12/14/2023	--	16.68	--	5,771.31
		3/28/2024	--	17.08	--	5,770.91
MW12	5,789.57	10/22/2018	--	21.77	--	5,767.80
		3/29/2019	--	21.88	--	5,767.69
		6/28/2019	--	21.67	--	5,767.90
		9/17/2019	--	21.49	--	5,768.08
		12/17/2019	--	21.54	--	5,768.03
		3/12/2020	--	21.31	--	5,768.26
		6/25/2020	--	21.21	--	5,768.36
		9/23/2020	--	21.02	--	5,768.55
		3/31/2021	--	20.93	--	5,768.64
		6/14/2021	--	20.61	--	5,768.96
		9/24/2021	--	20.17	--	5,769.40
		12/2/2021	--	20.17	--	5,769.40
		3/1/2022	--	20.30	--	5,769.27
		6/7/2022	--	20.02	--	5,769.55
		9/29/2022	--	19.68	--	5,769.89
		12/8/2022	--	19.57	--	5,770.00
		3/2/2023	--	19.32	--	5,770.25
		6/16/2023	--	19.11	--	5,770.46
		9/14/2023	--	19.04	--	5,770.53
		12/14/2023	--	19.01	--	5,770.56
		3/28/2024	--	19.49	--	5,770.08

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW13	5,785.16	10/22/2018	--	DRY	--	DRY
		3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	DRY	--	DRY
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	DRY	--	DRY
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	DRY	--	DRY
		12/8/2022	--	DRY	--	DRY
		3/2/2023	--	DRY	--	DRY
		6/16/2023	--	DRY	--	DRY
		9/14/2023	--	DRY	--	DRY
		12/14/2023	--	DRY	--	DRY
		3/28/2024	--	DRY	--	DRY
MW14	5,785.46	10/22/2018	--	22.87	--	5,762.59
		3/29/2019	20.26	20.47	0.21	5,765.16
		6/28/2019	19.15	19.16	0.01	5,766.31
		9/17/2019	18.65	18.69	0.04	5,766.80
		12/17/2019	18.61	18.74	0.13	5,766.82
		3/12/2020	--	18.81	--	5,766.65
		6/25/2020	--	18.18	--	5,767.28
		9/23/2020	--	17.92	--	5,767.54
		3/31/2021	--	17.92	--	5,767.54
		6/14/2021	Trace	17.78	Trace	5,767.68
		9/24/2021	--	17.52	--	5,767.94
		12/3/2021	--	17.79	--	5,767.67
		3/1/2022	--	17.18	--	5,768.28
		6/7/2022	--	16.84	--	5,768.62
		9/29/2022	--	16.37	--	5,769.09
		12/8/2022	--	16.17	--	5,769.29
		3/2/2023	Trace	15.91	Trace	5,769.55
		6/16/2023	Trace	15.63	Trace	5,769.83
		9/14/2023	--	15.65	--	5,769.81
		12/14/2023	--	15.63	--	5,769.83
		3/28/2024	Trace	15.84	Trace	5,769.62

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW15	5,792.19	3/29/2019	--	DRY	--	DRY
		6/28/2019	--	35.95	--	5,756.24
		9/17/2019	--	33.22	--	5,758.97
		12/17/2019	--	31.61	--	5,760.58
		3/12/2020	--	31.42	--	5,760.77
		6/25/2020	--	30.41	--	5,761.78
		9/23/2020	--	27.42	--	5,764.77
		3/31/2021	--	27.8	--	5,764.39
		6/14/2021	--	29.18	--	5,763.01
		9/24/2021	--	26.69	--	5,765.50
		12/3/2021	--	26.82	--	5,765.37
		3/1/2022	--	26.57	--	5,765.62
		6/7/2022	--	26.49	--	5,765.70
		9/29/2022	--	25.95	--	5,766.24
		12/8/2022	--	26.21	--	5,765.98
		3/2/2023	--	25.95	--	5,766.24
		6/16/2023	--	25.08	--	5,767.11
		9/14/2023	--	25.97	--	5,766.22
		12/14/2023	--	--	--	--
		3/28/2024	--	21.03	--	5,771.16
MW16	5,786.54	3/29/2019	--	28.59	--	5,757.95
		6/28/2019	--	21.00	--	5,765.54
		9/17/2019	--	20.91	--	5,765.63
		12/17/2019	--	21.11	--	5,765.43
		3/12/2020	--	20.89	--	5,765.65
		6/25/2020	--	20.51	--	5,766.03
		9/23/2020	--	20.37	--	5,766.17
		3/31/2021	19.99	20.04	0.05	5,766.54
		6/14/2021	Trace	19.51	Trace	5,767.03
		9/24/2021	--	18.81	--	5,767.73
		12/2/2021	Trace	18.46	Trace	5,768.08
		3/1/2022	--	18.39	--	5,768.15
		6/7/2022	--	18.00	--	5,768.54
		9/29/2022	17.53	17.54	0.01	5,769.01
		12/8/2022	--	17.32	--	5,769.22
		3/2/2023	--	17.03	--	5,769.51
		6/16/2023	--	16.81	--	5,769.73
		9/14/2023	--	16.82	--	5,769.72
		12/15/2023	--	16.75	--	5,769.79
		3/28/2024	--	16.91	--	5,769.63

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW17	5,785.25	3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	30.24	--	5,755.01
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	30.24	--	5,755.01
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	30.21	--	5,755.04
		9/29/2022	--	30.22		5,755.03
		12/8/2022	--	28.68		5,756.57
		3/2/2023	--	25.58	--	5,759.67
		6/16/2023	--	22.13	--	5,763.12
		9/14/2023	--	20.78	--	5,764.47
		12/15/2023	--	21.68	--	5,763.57
		3/28/2024	--	22.38	--	5,762.87
MW18	5,789.34	3/29/2019	--	DRY	--	DRY
		6/28/2019	--	20.39	--	5,768.95
		9/17/2019	--	19.06	--	5,770.28
		12/17/2019	--	19.98	--	5,769.36
		3/12/2020	--	19.98	--	5,769.36
		6/25/2020	--	19.79	--	5,769.55
		9/23/2020	--	19.55	--	5,769.79
		3/31/2021	--	19.43	--	5,769.91
		6/14/2021	--	18.98	--	5,770.36
		9/24/2021	--	18.52	--	5,770.82
		12/2/2021	--	18.64	--	5,770.70
		3/1/2022	--	18.90	--	5,770.44
		6/7/2022	--	18.25	--	5,771.09
		9/29/2022	--	18.01	--	5,771.33
		12/8/2022	--	17.91	--	5,771.43
		3/2/2023	--	17.64	--	5,771.70
		6/16/2023	--	17.38	--	5,771.96
		9/14/2023	--	17.43	--	5,771.91
		12/14/2023	--	17.37	--	5,771.97
		3/27/2024	--	17.61	--	5,771.73

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW19	5,786.48	3/29/2019	--	19.60	--	5,766.88
		6/28/2019	--	19.55	--	5,766.93
		9/17/2019	--	19.35	--	5,767.13
		12/17/2019	--	19.37	--	5,767.11
		3/12/2020	--	19.45	--	5,767.03
		6/25/2020	--	19.30	--	5,767.18
		9/23/2020	--	19.08	--	5,767.40
		3/31/2021	--	19.21	--	5,767.27
		6/14/2021	--	19.10	--	5,767.38
		9/24/2021	--	18.70	--	5,767.78
		12/2/2021	--	DRY	--	DRY
		3/1/2022	--	18.49	--	5,767.99
		6/7/2022	--	18.35	--	5,768.13
		9/29/2022	--	17.15	--	5,769.33
		12/8/2022	--	18.19	--	5,768.29
		3/2/2023	--	17.93	--	5,768.55
		6/16/2023	--	17.72	--	5,768.76
		9/14/2023	--	17.58	--	5,768.90
		12/15/2023	--	17.63	--	5,768.85
		3/28/2024	--	18.27	--	5,768.21
MW20	5,783.34	3/29/2019	--	29.61	--	5,753.73
		6/28/2019	--	30.00	--	5,753.34
		9/17/2019	--	30.21	--	5,753.13
		12/17/2019	--	30.15	--	5,753.19
		3/12/2020	--	30.30	--	5,753.04
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	30.24	--	5,753.10
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	DRY	--	DRY
		12/8/2022	--	30.25	--	5,753.09
		3/2/2023	--	DRY	--	DRY
		6/16/2023	--	30.25	--	5,753.09
		9/14/2023	--	DRY	--	DRY
		12/15/2023	--	DRY	--	DRY
		3/27/2024	--	DRY	--	DRY

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Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW21	5,800.30	3/29/2019	--	DRY	--	DRY
		6/28/2019	--	DRY	--	DRY
		9/17/2019	--	DRY	--	DRY
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	DRY	--	DRY
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	DRY	--	DRY
		12/8/2022	--	DRY	--	DRY
		3/2/2023	--	DRY	--	DRY
		6/16/2023	--	DRY	--	DRY
		9/14/2023	--	DRY	--	DRY
		12/15/2023	--	DRY	--	DRY
		3/27/2024	--	DRY	--	DRY
MW22	5,786.25	3/29/2019	--	22.56	--	5,763.69
		6/28/2019	--	17.62	--	5,768.63
		9/17/2019	--	17.54	--	5,768.71
		12/17/2019	--	17.35	--	5,768.90
		3/12/2020	--	17.10	--	5,769.15
		6/25/2020	--	17.04	--	5,769.21
		9/23/2020	--	16.85	--	5,769.40
		3/31/2021	--	16.43	--	5,769.82
		6/14/2021	--	16.10	--	5,770.15
		9/24/2021	--	15.74	--	5,770.51
		12/2/2021	--	15.84	--	5,770.41
		3/1/2022	--	15.95	--	5,770.30
		6/7/2022	--	15.53	--	5,770.72
		9/29/2022	--	15.25	--	5,771.00
		12/8/2022	--	15.16	--	5,771.09
		3/2/2023	--	14.90	--	5,771.35
		6/16/2023	--	14.68	--	5,771.57
		9/14/2023	--	14.97	--	5,771.28
		12/14/2023	--	14.64	--	5,771.61
		3/28/2024	--	14.77	--	5,771.48

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MW23	5,804.80	6/28/2019	--	45.99	--	5,758.81
		9/17/2019	--	40.23	--	5,764.57
		12/17/2019	--	39.16	--	5,765.64
		3/12/2020	--	38.71	--	5,766.09
		6/25/2020	--	38.92	--	5,765.88
		9/23/2020	--	38.83	--	5,765.97
		3/31/2021	--	37.97	--	5,766.83
		6/14/2021	--	37.90	--	5,766.90
		9/24/2021	--	37.44	--	5,767.36
		12/3/2021	--	37.32	--	5,767.48
		3/1/2022	--	37.38	--	5,767.42
		6/7/2022	--	36.99	--	5,767.81
		9/29/2022	--	36.61	--	5,768.19
		12/8/2022	--	36.49	--	5,768.31
		3/2/2023	--	36.11	--	5,768.69
		6/16/2023	--	35.70	--	5,769.10
		9/15/2023	--	35.58	--	5,769.22
		12/14/2023	--	35.48	--	5,769.32
		3/27/2024	--	35.25	--	5,769.55
MW24	5,782.50	6/28/2019	--	DRY	--	DRY
		9/17/2019	--	DRY	--	DRY
		12/17/2019	--	DRY	--	DRY
		3/12/2020	--	DRY	--	DRY
		6/25/2020	--	DRY	--	DRY
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/2/2021	--	33.08	--	5,749.42
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	DRY	--	DRY
		9/29/2022	--	33.09	--	5,749.41
		12/8/2022	--	DRY	--	DRY
		3/2/2023	--	33.07	--	5,749.43
		6/16/2023	--	DRY	--	DRY
		9/15/2023	--	DRY	--	DRY
		12/14/2023	--	DRY	--	DRY
		3/27/2024	--	DRY	--	DRY

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TABLE 6
GROUNDWATER ELEVATION
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW25	5,775.65	6/28/2019	--	32.98	--	5,742.67
		9/17/2019	--	32.91	--	5,742.74
		12/17/2019	--	32.92	--	5,742.73
		3/12/2020	--	32.92	--	5,742.73
		6/25/2020	--	32.93	--	5,742.72
		9/23/2020	--	DRY	--	DRY
		3/31/2021	--	DRY	--	DRY
		6/14/2021	--	DRY	--	DRY
		9/24/2021	--	DRY	--	DRY
		12/1/2021	--	33.06	--	5,742.59
		3/1/2022	--	DRY	--	DRY
		6/7/2022	--	33.04	--	5,742.61
		9/29/2022	--	33.05	--	5,742.60
		12/8/2022	--	DRY	--	DRY
		3/2/2023	--	DRY	--	DRY
		6/16/2023	--	DRY	--	DRY
		9/15/2023	--	DRY	--	DRY
		12/14/2023	--	DRY	--	DRY
		3/27/2024	--	DRY	--	DRY
MW26	5,789.96	6/28/2019	--	19.71	--	5,770.25
		9/17/2019	--	19.64	--	5,770.32
		12/17/2019	--	19.41	--	5,770.55
		3/12/2020	--	19.29	--	5,770.67
		6/25/2020	--	19.29	--	5,770.67
		9/23/2020	--	19.28	--	5,770.68
		3/31/2021	--	18.64	--	5,771.32
		6/14/2021	--	18.30	--	5,771.66
		9/24/2021	--	18.32	--	5,771.64
		12/3/2021	--	18.55	--	5,771.41
		3/1/2022	--	18.50	--	5,771.46
		6/7/2022	--	17.86	--	5,772.10
		9/29/2022	--	17.81	--	5,772.15
		12/8/2022	--	17.65	--	5,772.31
		3/2/2023	--	17.30	--	5,772.66
		6/16/2023	--	17.04	--	5,772.92
		9/14/2023	--	17.20	--	5,772.76
		12/14/2023	--	17.12	--	5,772.84
		3/27/2024	--	16.98	--	5,772.98

Notes:

AMSL: above mean sea level

BTOC: below top of casing

Trace: trace amounts of free product in well

--: not measured

A product density factor if 0.8 was used to account for the presence of free product

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW01	10/22/2018	No sample collected due to presence of PSH			
	3/29/2019	No sample collected due to presence of PSH			
	6/28/2019	No sample collected due to presence of PSH			
	9/17/2019	No sample collected due to presence of PSH			
	12/17/2019	No sample collected due to presence of PSH			
	3/12/2020	No sample collected due to presence of PSH			
	6/25/2020	No sample collected due to presence of PSH			
	9/23/2020	No sample collected due to presence of PSH			
	3/21/2021	No sample collected due to presence of PSH			
	6/14/2021	No sample collected due to presence of PSH			
	9/20/2021	**27**	**39**	**1.3**	**15**
	12/2/2021	No sample collected due to presence of PSH			
	3/1/2022	No sample collected due to presence of PSH			
	6/7/2022	No sample collected due to presence of PSH			
	9/29/2022	No sample collected due to presence of PSH			
	12/8/2022	No sample collected due to presence of PSH			
	3/2/2023	No sample collected due to presence of PSH			
	6/16/2023	No sample collected due to presence of PSH			
	9/15/2023	NS	NS	NS	NS
	12/14/2023	NS	NS	NS	NS
	3/27/2024	**24**	**34**	**1.5**	**17**
MW02	10/22/2018	**14**	**7.1**	**1.2**	**12**
	3/29/2019	No sample collected due to presence of PSH			
	6/28/2019	No sample collected due to presence of PSH			
	9/17/2019	No sample collected due to presence of PSH			
	12/17/2019	No sample collected due to presence of PSH			
	3/12/2020	**17**	**8.2**	**1.8**	**15**
	6/25/2020	**19**	**18**	**2.3**	**21**
	9/23/2020	**17**	**16**	**2.8**	**25**
	3/31/2021	**16**	**12**	**2.0**	**20**
	6/14/2021	No sample collected due to presence of PSH			
	9/20/2021	**15**	**7.3**	**1.6**	**20**
	12/3/2021	**16**	**6.9**	**1.8**	**21**
	3/1/2022	**14**	**4.4**	**1.3**	**15**
	6/7/2022	No sample collected due to presence of PSH			
	9/29/2022	**16**	**2.6**	**1.6**	**16**
	12/8/2022	**16**	**2.5**	**1.9**	**18**
	3/2/2023	No sample collected due to presence of PSH			
	6/16/2023	No sample collected due to presence of PSH			
	9/15/2023	NS	NS	NS	NS
	12/14/2023	NS	NS	NS	NS
	3/27/2024	**14**	**3.6**	0.33	**6.8**

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		**0.005**	**1.0**	**0.7**	**0.62**
MW03	10/22/2018	Insufficient Water Volumes to Collect Sample			
	3/29/2019	**21**	0.110	0.27	**11**
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	**12**	0.25	0.22	**6.9**
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	**15**	<0.20	0.47	**6.3**
	6/25/2020	**14**	0.11	0.51	**1.5**
	9/23/2020	**14**	0.57	0.46	**3.5**
	3/31/2021	**13**	**1.3**	0.48	**1.7**
	6/14/2021	**12**	**1.8**	0.37	**4.9**
	9/23/2021	**13**	**4.2**	0.34	**8.2**
	12/3/2021	**16**	**2.3**	0.54	**5.5**
	3/1/2022	**16**	**2.2**	0.59	**6.0**
	6/7/2022	**16**	**2.6**	0.70	**6.6**
	9/29/2022	**17**	**1.0**	0.66	**6.4**
	12/8/2022	**17**	**1.0**	**0.73**	**6.8**
	3/2/2023	**17**	**1.1**	0.65	**5.6**
	6/16/2023	**16**	**1.8**	0.68	**6.2**
	9/15/2023	**18**	**1.0**	0.65	**5.8**
	12/14/2023	NS	NS	NS	NS
	3/27/2024	**9.2**	**5.5**	<0.20	**4.3**
MW04	10/22/2018	Insufficient Water Volumes to Collect Sample			
	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	**1.1**	<0.002	0.095	0.018
	6/14/2021	**1.7**	0.0035	0.11	0.020
	9/20/2021	**0.83**	0.045	0.051	0.14
	12/3/2021	**1.3**	<0.010	0.099	<0.020
	3/1/2022	**0.91**	<0.020	0.066	<0.040
	6/7/2022	**0.24**	<0.0010	<0.0010	<0.0020
	9/29/2022	**1.5**	<0.020	0.033	<0.030
	12/8/2022	**No sample collected due to presence of PSH**			
	3/2/2023	**0.32**	<0.008	<0.008	<0.016
	6/16/2023	**No sample collected due to presence of PSH**			
	9/15/2023	**No sample collected due to presence of PSH**			
	12/14/2023	**No sample collected due to presence of PSH**			
	3/27/2024	**No sample collected due to presence of PSH**			

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		**0.005**	**1.0**	**0.7**	**0.62**
MW05	10/22/2018	Insufficient Water Volumes to Collect Sample			
	3/29/2019	**10**	0.88	0.45	**2.9**
	6/28/2019	**5.9**	0.16	0.20	**1.4**
	9/17/2019	**5.0**	0.77	0.11	**3.1**
	12/17/2019	**5.4**	0.14	0.15	**2.6**
	3/12/2020	**4.4**	0.13	0.18	**1.0**
	6/25/2020	**5.0**	0.17	0.087	**0.70**
	9/23/2020	**3.9**	**1.1**	0.26	**4.2**
	3/31/2021	**2.5**	**6.0**	**0.73**	**15**
	6/14/2021	**4.4**	**1.8**	0.55	**18**
	9/20/2021	**3.5**	**4.0**	**0.80**	**20**
	12/3/2021	**3.6**	**3.5**	**0.72**	**19**
	3/1/2022	**2.9**	0.81	0.62	**13**
	6/7/2022	**No sample collected due to presence of PSH**			
	9/29/2022	**No sample collected due to presence of PSH**			
	12/8/2022	**No sample collected due to presence of PSH**			
	3/2/2023	**No sample collected due to presence of PSH**			
	6/16/2023	**No sample collected due to presence of PSH**			
	9/15/2023	**No sample collected due to presence of PSH**			
	12/14/2023	**No sample collected due to presence of PSH**			
	3/27/2024	**No sample collected due to presence of PSH**			
MW06	10/22/2018	**No sample collected due to presence of PSH**			
	3/29/2019	**No sample collected due to presence of PSH**			
	6/28/2019	**No sample collected due to presence of PSH**			
	9/17/2019	**No sample collected due to presence of PSH**			
	12/17/2019	**No sample collected due to presence of PSH**			
	3/12/2020	**19**	**25**	**1.3**	**14**
	6/25/2020	**20**	**31**	**1.5**	**17**
	9/23/2020	**16**	**24**	**1.5**	**18**
	3/31/2021	**16**	**21**	**1.7**	**21**
	9/24/2021	**No sample collected due to presence of PSH**			
	9/20/2021	**14**	**19**	**1.3**	**16**
	12/3/2021	**13**	**19**	**1.3**	**17**
	3/1/2022	**13**	**20**	**1.3**	**18**
	6/7/2022	**11**	**15**	**1.1**	**16**
	9/29/2022	**No sample collected due to presence of PSH**			
	12/8/2022	**No sample collected due to presence of PSH**			
	3/2/2023	**No sample collected due to presence of PSH**			
	6/16/2023	**No sample collected due to presence of PSH**			
	9/15/2023	**No sample collected due to presence of PSH**			
	12/14/2023	NS	NS	NS	NS
	3/27/2024	**2.9**	**3.1**	0.59	**8.7**

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW07	10/22/2018	Well Damaged, No Sample Collected			
	3/29/2019	Well Damaged, No Sample Collected			
	6/28/2019	Well Damaged, No Sample Collected			
	9/17/2019	Well Damaged, No Sample Collected			
	12/17/2019	Well Damaged, No Sample Collected			
	3/12/2020	Well Damaged, No Sample Collected			
	6/25/2020	Well Damaged, No Sample Collected			
	9/23/2020	Well Damaged, No Sample Collected			
	3/31/2021	Well Damaged, No Sample Collected			
	6/14/2021	Well Damaged, No Sample Collected			
	9/20/2021	Well Damaged, No Sample Collected			
	12/3/2021	Well Damaged, No Sample Collected			
	3/1/2022	Well Damaged, No Sample Collected			
	6/7/2022	Well Damaged, No Sample Collected			
	9/29/2022	Well Damaged, No Sample Collected			
	12/8/2022	Well Damaged, No Sample Collected			
	3/2/2023	Well Damaged, No Sample Collected			
	6/16/2023	Well Damaged, No Sample Collected			
	9/15/2023	Well Damaged, No Sample Collected			
	12/14/2023	Well Damaged, No Sample Collected			
	3/27/2024	Well Damaged, No Sample Collected			
MW08	10/22/2018	Insufficient Water Volumes to Collect Sample			
	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	<0.0010	<0.0010	<0.0010	<0.0020
	9/17/2019	<0.0010	<0.0010	<0.0010	<0.0020
	3/12/2020	<0.0010	<0.0010	<0.0010	0.0017
	6/25/2020	<0.0010	<0.0010	<0.0010	<0.0015
	9/23/2020	<0.0010	<0.0010	<0.0010	<0.0015
	3/31/2021	<0.0010	<0.0010	<0.0010	<0.0015
	6/14/2021	<0.0010	<0.0010	<0.0010	<0.0015
	9/23/2021	<0.0010	<0.0010	<0.0010	<0.0020
	12/2/2021	<0.0010	<0.0010	<0.0010	<0.0020
	3/1/2022	<0.0010	<0.0010	<0.0010	<0.0020
	6/7/2022	<0.0010	<0.0010	<0.0010	<0.0020
	9/29/2022	<0.0010	<0.0010	<0.0010	<0.0015
	12/8/2022	<0.0010	<0.0010	<0.0010	<0.0015
	3/2/2023	<0.0010	<0.0010	<0.0010	<0.0020
	6/16/2023	<0.0010	<0.0010	<0.0010	<0.0020
	9/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	12/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	3/27/2024	<0.0010	<0.0010	<0.0010	<0.0015

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		**0.005**	**1.0**	**0.7**	**0.62**
MW09	10/22/2018	Insufficient Water Volumes to Collect Sample			
	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/20/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	Insufficient Water Volumes to Collect Sample			
	6/16/2023	**0.021**	0.027	0.0019	0.015
	9/15/2023	**1.1**	0.0036	0.078	**1.4**
	12/15/2023	**1.1**	<0.01	0.096	0.29
	3/28/2024	**1.0**	<0.01	0.087	<0.015
MW10	10/22/2018	**22**	**21**	**1.6**	**13**
	3/29/2019	**No sample collected due to presence of PSH**			
	6/28/2019	**No sample collected due to presence of PSH**			
	9/17/2019	**No sample collected due to presence of PSH**			
	12/17/2019	**No sample collected due to presence of PSH**			
	3/12/2020	**No sample collected due to presence of PSH**			
	6/25/2020	**No sample collected due to presence of PSH**			
	9/23/2020	**No sample collected due to presence of PSH**			
	3/31/2021	**No sample collected due to presence of PSH**			
	6/14/2021	**No sample collected due to presence of PSH**			
	9/23/2021	**19**	**4.8**	**1.4**	**15**
	12/3/2021	**21**	**5.8**	**1.4**	**14**
	3/1/2022	**20**	**5.6**	**1.4**	**13**
	6/7/2022	**No sample collected due to presence of PSH**			
	9/29/2022	**No sample collected due to presence of PSH**			
	12/8/2022	**No sample collected due to presence of PSH**			
	3/2/2023	**No sample collected due to presence of PSH**			
	6/16/2023	**No sample collected due to presence of PSH**			
	9/15/2023	**No sample collected due to presence of PSH**			
	12/14/2023	NS	NS	NS	NS
	3//27/23	**13**	<0.5	**1.4**	**7.8**

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW11	10/22/2018	<0.0010	<0.0010	<0.0010	<0.0015
	3/29/2019	0.0036	<0.0010	<0.0010	<0.0015
	6/28/2019	<0.0010	<0.0010	<0.0010	<0.0015
	9/17/2019	<0.0010	<0.0010	<0.0010	<0.002
	12/17/2019	NS	NS	NS	NS
	3/12/2020	0.001	0.0011	<0.0010	0.0051
	6/25/2020	<0.0010	<0.0010	<0.0010	<0.0015
	9/23/2020	<0.0010	<0.0010	<0.0010	<0.0015
	3/31/2021	<0.0010	<0.0010	<0.0010	<0.0015
	6/14/2021	<0.0010	<0.0010	<0.0010	<0.0015
	9/23/2021	<0.0010	<0.0010	<0.0010	<0.002
	12/2/2021	<0.0010	<0.0010	<0.0010	<0.002
	3/1/2022	<0.0010	<0.0010	<0.0010	<0.002
	6/7/2022	<0.0010	<0.0010	<0.0010	<0.002
	9/29/2022	<0.0010	<0.0010	<0.0010	<0.0015
	12/8/2022	<0.0010	<0.0010	<0.0010	<0.0015
	3/2/2023	<0.0010	<0.0010	<0.0010	<0.0020
	6/16/2023	<0.0010	<0.0010	<0.0010	<0.0020
	9/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	12/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	3/28/2024	<0.0010	<0.0010	<0.0010	<0.0015
MW12	10/22/2018	**2.4**	**3.8**	**1.1**	**5.0**
	3/29/2019	**0.87**	0.018	**1.2**	**1.5**
	6/28/2019	**0.81**	0.055	**1.0**	0.50
	9/17/2019	**0.92**	0.12	**1.1**	0.41
	12/17/2019	**0.94**	0.034	0.46	0.24
	3/12/2020	**1.6**	0.360	0.48	0.55
	6/25/2020	**0.71**	0.220	<0.02	0.34
	9/23/2020	**0.89**	0.087	0.22	0.12
	3/31/2021	**0.69**	0.051	0.14	0.054
	6/14/2021	**0.37**	0.0052	0.072	0.012
	12/2/2021	NS	NS	NS	NS
	12/2/2021	**0.37**	<0.0050	0.110	<0.010
	3/1/2022	**0.24**	<0.0020	0.031	<0.0040
	6/7/2022	**0.11**	<0.0010	0.016	0.0030
	9/29/2022	**0.046**	<0.0050	0.014	<0.0075
	12/8/2022	**0.041**	<0.020	<0.020	<0.030
	3/2/2023	**0.043**	0.0010	0.0036	0.0032
	6/16/2023	**0.052**	<0.0010	0.0057	0.0029
	9/14/2023	**0.048**	<0.0010	0.0056	<0.0020
	12/14/2023	**0.0053**	<0.0010	0.0011	<0.0020
	3/28/2024	**0.036**	<0.0010	<0.0010	<0.0015

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW14	10/22/2018	13	26	1.1	10
	3/29/2019	No sample collected due to presence of PSH			
	6/28/2019	No sample collected due to presence of PSH			
	9/17/2019	No sample collected due to presence of PSH			
	12/17/2019	NS	NS	NS	NS
	3/12/2020	13	13	1.3	14
	6/25/2020	11	17	1.0	15
	9/23/2020	8.2	14	0.80	16
	3/31/2021	9.4	17	1.5	18
	6/14/2021	No sample collected due to presence of PSH			
	9/24/2021	7.1	9.2	0.80	14
	12/3/2021	6.5	7.6	1.2	15
	3/1/2022	5.3	5.7	1.2	14
	6/7/2022	No sample collected due to presence of PSH			
	9/29/2022	4.3	1.3	1.1	6.3
	12/8/2022	3.8	1.8	1.6	9.5
	3/2/2023	No sample collected due to presence of PSH			
	6/16/2023	No sample collected due to presence of PSH			
	9/15/2023	No sample collected due to presence of PSH			
	12/14/2023	No sample collected due to presence of PSH			
	3/28/2024	No sample collected due to presence of PSH			
MW15	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	24	28	1.1	10
	9/17/2019	24	28	0.87	9.4
	12/17/2019	23	29	0.64	10
	3/12/2020	23	4.5	0.66	9.4
	6/25/2020	28	1.0	0.47	8.6
	9/23/2020	21	1.2	0.61	8.6
	3/31/2021	25	0.6	0.69	8.5
	6/14/2021	26	0.42	0.60	8.9
	9/23/2021	22	0.82	0.57	6.6
	12/3/2021	24	1.0	0.56	4.1
	3/1/2022	23	3.4	0.65	4.4
	6/7/2022	22	3.9	0.50	2.9
	9/29/2022	24	7.5	0.64	4.6
	12/8/2022	25	4.9	0.54	4.8
	3/2/2023	21	6.0	0.61	4.6
	6/16/2023	21	7.6	0.47	3.5
	9/14/2023	29	10	0.59	4.3
	12/14/2023	NS	NS	NS	NS
	3/27/2024	14	1.0	<0.5	1.8

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		**0.005**	**1.0**	**0.7**	**0.62**
MW16	3/29/2019	**7.7**	**14**	**0.94**	**8.6**
	6/28/2019	**3.4**	0.62	0.080	**2.1**
	9/17/2019	**3.3**	**1.6**	0.037	**4.4**
	12/17/2019	**2.3**	0.23	0.039	**1.8**
	3/12/2020	**2.3**	0.83	<0.050	**3.8**
	6/25/2020	**2.1**	0.34	0.051	**3.3**
	9/23/2020	**1.4**	0.23	0.075	**3.6**
	3/31/2021	**No sample collected due to presence of PSH**			
	6/14/2021	**No sample collected due to presence of PSH**			
	9/23/2021	0.32	0.62	**0.71**	**17**
	12/3/2021	**No sample collected due to presence of PSH**			
	3/1/2022	**0.56**	<0.020	0.43	**6.4**
	6/7/2022	**0.29**	<0.010	0.54	**6.5**
	9/29/2022	**No sample collected due to presence of PSH**			
	12/8/2022	**0.15**	<0.050	0.38	**2.1**
	3/2/2023	**0.11**	<0.020	0.32	**1.8**
	6/16/2023	**0.10**	<0.050	0.34	**1.1**
	9/14/2023	**0.13**	<0.050	0.41	**1.2**
	12/15/2023	**0.089**	<0.020	0.38	0.49
	3/28/2024	**0.077**	<0.020	0.34	0.31
MW17	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	<0.002	<0.002	<0.002	<0.004
	6/16/2023	<0.0010	<0.0010	<0.0010	<0.0020
	9/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	12/15/2023	<0.0010	<0.0010	<0.0010	<0.0020
	3/27/2024	<0.0010	<0.0010	<0.0010	<0.0015

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW18	3/29/2019	No sample collected due to presence of PSH			
	6/28/2019	**15**	**18**	**0.77**	**9.4**
	9/17/2019	**16**	**23**	**0.87**	**9.8**
	12/17/2019	**17**	**19**	**0.78**	**10**
	3/12/2020	**1.2**	0.36	0.059	**0.72**
	6/25/2020	**13**	<0.2	0.56	**6.0**
	9/23/2020	**8.4**	<0.05	0.32	**4.20**
	3/31/2021	**11.0**	0.011	0.31	**1.70**
	6/14/2021	**8.5**	<.01	0.28	0.62
	9/24/2021	**5.3**	<0.050	0.37	<0.100
	12/2/2021	**9.9**	<0.0020	0.61	<0.0040
	3/1/2022	**8.0**	<0.008	0.45	<0.016
	6/7/2022	**6.6**	<0.010	0.38	<0.020
	9/29/2022	**6.4**	<0.020	0.35	<0.030
	12/8/2022	**6.7**	<0.050	0.36	<0.075
	3/2/2023	**4.2**	<0.020	0.19	<0.040
	6/16/2023	**1.5**	<0.020	0.052	<0.040
	9/14/2023	**5.9**	<0.050	0.28	<0.100
	12/14/2023	**5.5**	<0.020	0.33	<0.040
	3/27/2024	**0.067**	<0.020	0.15	<0.030
MW19	3/29/2019	**14**	**10**	**0.93**	**6.2**
	6/28/2019	**13**	0.230	**0.90**	**4.9**
	9/17/2019	**17**	0.44	**1.1**	**5.8**
	12/17/2019	**11**	0.88	**0.76**	**3.4**
	3/12/2020	**10**	**1.60**	**0.76**	**2.4**
	6/25/2020	**16**	**5.40**	**0.95**	**3.4**
	9/23/2020	**12**	**4.10**	**0.73**	**2.8**
	3/31/2021	**16**	**8.5**	**1.1**	**4.7**
	6/14/2021	**15**	**10**	**1.0**	**5.1**
	9/23/2021	**14**	**9.9**	**1.1**	**4.8**
	12/2/2021	**15**	**10**	**1.1**	**5.2**
	3/1/2022	**13**	**9.6**	**1.1**	**5.2**
	6/7/2022	**12**	**10**	**1.1**	**5.4**
	9/29/2022	**13**	**12**	**1.1**	**6.2**
	12/8/2022	**12**	**14**	**1.3**	**7.8**
	3/2/2023	**10**	**12**	**1.0**	**6.1**
	6/16/2023	**10**	**14**	**1.2**	**7.2**
	9/14/2023	**9.7**	**15**	**1.2**	**8.2**
	12/14/2023	**7.7**	**14**	**1.3**	**8.1**
	3/28/2024	**6.7**	**17**	**1.1**	**9.2**

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW20	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	Insufficient Water Volumes to Collect Sample			
	6/16/2023	Insufficient Water Volumes to Collect Sample			
	9/14/2023	Insufficient Water Volumes to Collect Sample			
	12/14/2023	Insufficient Water Volumes to Collect Sample			
	3/27/2024	Insufficient Water Volumes to Collect Sample			
MW21	3/29/2019	Insufficient Water Volumes to Collect Sample			
	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	Insufficient Water Volumes to Collect Sample			
	6/16/2023	Insufficient Water Volumes to Collect Sample			
	9/14/2023	Insufficient Water Volumes to Collect Sample			
	12/14/2023	Insufficient Water Volumes to Collect Sample			
	3/27/2024	Insufficient Water Volumes to Collect Sample			

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW22	3/29/2019	0.001	0.002	<0.001	0.002
	6/28/2019	<0.001	<0.001	<0.001	<0.002
	9/17/2019	<0.001	<0.001	<0.001	<0.002
	12/17/2019	NS	NS	NS	NS
	3/12/2020	0.0011	0.0012	<0.001	0.0067
	6/25/2020	<0.001	<0.001	<0.001	0.0032
	9/23/2020	<0.001	<0.001	<0.001	<0.0015
	3/31/2021	<0.001	<0.001	<0.001	<0.0015
	6/14/2021	<0.001	<0.001	<0.001	<0.0015
	9/23/2021	<0.001	<0.001	<0.001	<0.002
	12/2/2021	<0.001	<0.001	<0.001	<0.002
	3/1/2022	<0.001	<0.001	<0.001	<0.002
	6/7/2022	<0.001	<0.001	<0.001	<0.002
	9/29/2022	<0.001	<0.001	<0.001	<0.0015
	12/8/2022	<0.002	<0.002	<0.002	<0.003
	3/2/2023	<0.002	<0.002	<0.002	<0.004
	6/16/2023	<0.0020	<0.0020	<0.0020	<0.0040
	9/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	12/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	3/28/2024	<0.0010	<0.0010	<0.0010	<0.0015
MW23	6/18/2019	<0.001	<0.001	<0.001	<0.002
	9/17/2019	<0.001	<0.001	<0.001	<0.002
	12/17/2019	NS	NS	NS	NS
	3/12/2020	<0.001	<0.001	<0.001	<0.0015
	6/25/2020	<0.001	<0.001	<0.001	<0.0015
	9/23/2020	<0.001	<0.001	<0.001	<0.0015
	3/31/2021	<0.001	<0.001	<0.001	<0.0015
	6/14/2021	<0.001	<0.001	<0.001	<0.0015
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	<0.001	<0.001	<0.001	<0.002
	3/1/2022	<0.001	<0.001	<0.001	<0.002
	6/7/2022	<0.001	<0.001	<0.001	<0.002
	9/29/2022	<0.001	<0.001	<0.001	<0.0015
	12/8/2022	<0.002	<0.002	<0.002	<0.003
	3/2/2023	<0.002	<0.002	<0.002	<0.004
	6/16/2023	<0.0020	<0.0020	<0.0020	<0.0040
	9/15/2023	<0.001	<0.001	<0.001	<0.002
	12/14/2023	<0.001	<0.001	<0.001	<0.002
	3/27/2024	<0.001	<0.001	<0.001	<0.0015

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW24	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	Insufficient Water Volumes to Collect Sample			
	6/16/2023	Insufficient Water Volumes to Collect Sample			
	9/14/2023	Insufficient Water Volumes to Collect Sample			
	12/14/2023	Insufficient Water Volumes to Collect Sample			
	3/27/2024	Insufficient Water Volumes to Collect Sample			
MW25	6/28/2019	Insufficient Water Volumes to Collect Sample			
	9/17/2019	Insufficient Water Volumes to Collect Sample			
	12/17/2019	Insufficient Water Volumes to Collect Sample			
	3/12/2020	Insufficient Water Volumes to Collect Sample			
	6/25/2020	Insufficient Water Volumes to Collect Sample			
	9/23/2020	Insufficient Water Volumes to Collect Sample			
	3/31/2021	Insufficient Water Volumes to Collect Sample			
	6/14/2021	Insufficient Water Volumes to Collect Sample			
	9/23/2021	Insufficient Water Volumes to Collect Sample			
	12/3/2021	Insufficient Water Volumes to Collect Sample			
	3/1/2022	Insufficient Water Volumes to Collect Sample			
	6/7/2022	Insufficient Water Volumes to Collect Sample			
	9/29/2022	Insufficient Water Volumes to Collect Sample			
	12/8/2022	Insufficient Water Volumes to Collect Sample			
	3/2/2023	Insufficient Water Volumes to Collect Sample			
	6/16/2023	Insufficient Water Volumes to Collect Sample			
	9/14/2023	Insufficient Water Volumes to Collect Sample			
	12/14/2023	Insufficient Water Volumes to Collect Sample			
	3/27/2024	Insufficient Water Volumes to Collect Sample			

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TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Standard #1
Hilcorp Energy Company
San Juan County, New Mexico

Monitoring Well	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard		0.005	1.0	0.7	0.62
MW26	6/18/2019	**0.0052**	<0.001	<0.001	<0.002
	9/17/2019	<0.001	<0.001	<0.001	<0.002
	12/17/2019	<0.001	<0.001	<0.001	<0.002
	3/12/2020	<0.001	<0.001	<0.001	<0.0015
	6/25/2020	<0.001	<0.001	<0.001	<0.0015
	9/23/2020	<0.001	<0.001	<0.001	<0.0015
	3/31/2021	<0.001	<0.001	<0.001	<0.0015
	6/14/2021	<0.001	<0.001	<0.001	<0.0015
	9/24/2021	<0.001	<0.001	<0.001	<0.002
	12/3/2021	<0.001	<0.001	<0.001	<0.002
	3/1/2022	<0.001	<0.001	<0.001	<0.002
	6/7/2022	<0.001	<0.001	<0.001	<0.002
	9/29/2022	<0.001	<0.001	<0.001	<0.0015
	12/8/2022	<0.001	<0.001	<0.001	<0.0015
	3/2/2023	<0.001	<0.001	<0.001	<0.002
	6/16/2023	<0.0010	<0.0010	<0.0010	<0.0020
	9/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	12/14/2023	<0.0010	<0.0010	<0.0010	<0.0020
	3/27/2024	<0.0010	<0.0010	<0.0010	<0.0015

Notes:

mg/L: milligrams per liter

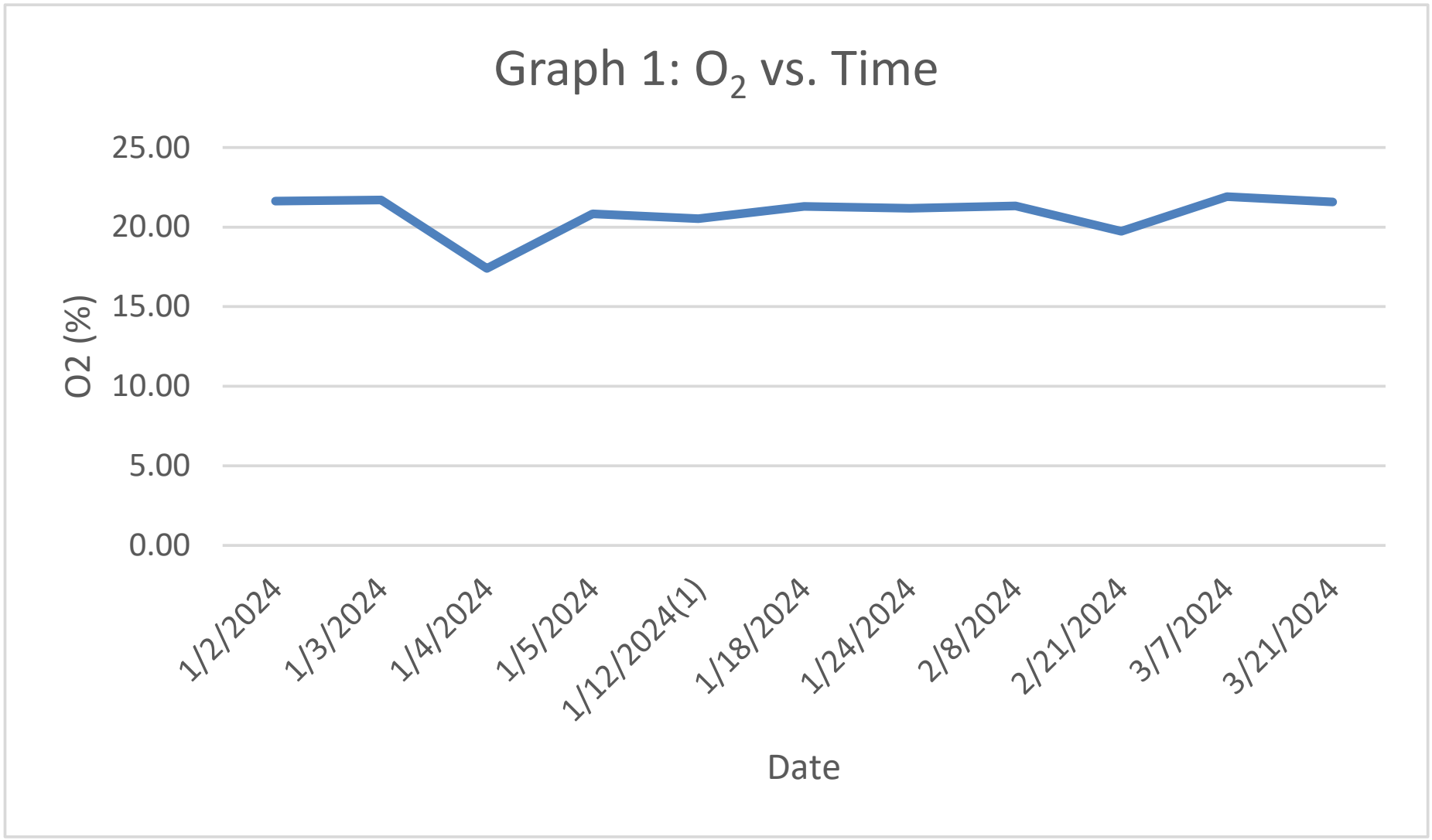
NMWQCC: New Mexico Water Quality Control Commission

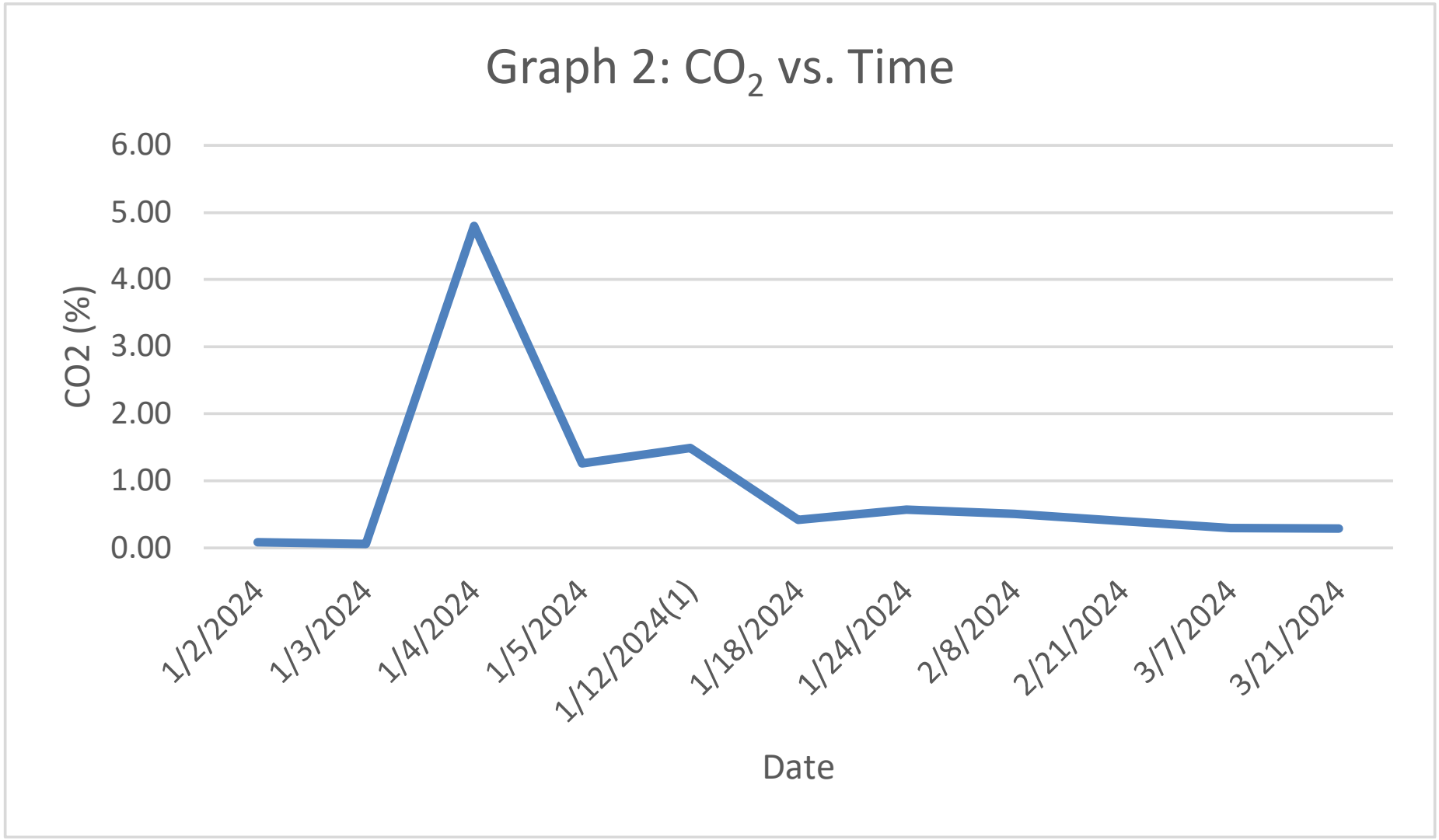
NS: not sampled

PSH: phase separated hydrocarbon

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

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





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APPENDIX A

O&M Field Notes

Standard #1A | HEC | 1-2-24 Sunny 30's

O&M data

Well	Mani Vac	Mani Flow	Mani PID	Mani O_2 vol%	Mani CH_4 %LEL	H_2S PPM	CO PPM	CO_2 vol%
01	12.7 IWC	44 CFM	101.8	20.9	0	0	0	0.08
10	13.05	44	104.2	20.9	0	0	0	0.08
02	13.01	44	74.2	20.9	0	0	0	0.06
15	13.05	46	125.6	20.9	0	0	0	0.12
06	13.10	48	153.2	20.9	1	0	0	0.18
03	13.04	45	139.8	20.9	0	0	0	0.14
Int	2.5 IH_g		198.2	20.9	1	0	0	0.06

Blower Readings
Pre-vac 2.5 IH_g
Post-vac 2.5 IH_g
Diff-Press 4.5 IWC

Influence

Well	Vac
MW-04	0.02 IWC
MW-07	0.01 IWC

Hours: 4.3 @ 14:20

Influent Sample "Influent 1-2-24" collected at 14:10

Standard #1A | HEC | 1-3-24 | EC | Sunny 40s

1300 on site for O&M and sampling

well	IWC VOC	Flow	PID	O_2 %	CH_4 % LEL	H_2S ppm	CO ppm	CO_2 ppm/% vol
01	13.07	14 CFM	87.4	20.9	1	0	0	0.04
10	13.11	16	92.3	20.9	1	0	0	0.02
02	13.17	20	101.7	20.9	1	0	0	0.02
15	13.16	20	124.6	20.9	1	0	0	0.02
06	13.17	23	161.0	20.9	1	0	0	0.04
03	13.13	25	240.4	20.9	1	0	0	0.06
Int	—	—	68.7	20.9	0	0	0	0.02

Pre vac: 2.5 IHg
Pose vac: 2.5 IHg
Diff press: 4.5 IWC

Influence
MW 04 0.01 IWC
MW07 0.02 IWC

Hours
Blower 28.1 @ 14:02
Transfer 0.3 @ 14:02

Exhaust Temp 125° F

Water discharge
pressure 0 psi
volume 99997528.5

Standard 1	HEC	1-4-24	EC	Overcast 30's

12:00 EC on site for OGM and sampling

vac: 2.5 IHg

12:30 Found fresh air by-pass was 100% open low vacuum

will allow blower to run for ~1 hour to equilibrate before taking readings

Well	mani vac	mani flow	mani PID	O_2 %vol	CH_4 %LEL	CO ppm	H_2S ppm	CO_2 %vol
01	13.5 IHg	093 CFM						
10	14.0	85						
02	13.5	86						
15	11.5	45						
06	12.0	48						
03	13.0	37						

To much water at manifold to field screen Individual wells. pulling water to vacuum sampler

pre-filter vac: 16 IHg
post-filter vac: 15.5 IHg
Diff pressure: 2.5 IWC

	PID	O_2	CH_4	H_2S	CO	CO_2
Influent	~~5.5~~	~~20.7~~	~~0~~	0	0	~~0.06~~
	467	16.6	4%	0	0	4.99

Hours
Blower: 52.6 @ 14:36
Pump: 0.3

Influence
MW04: 0.00 IWC
MW07 0.01 IWC

Standard IA | HEC | 1-5-24 | Sunny 30's

12:50 EC on Site for OBM

Well Head Readings

well	vac	PID	CH_4	O_2	H_2S	CO	CO_2
01	~~188~~ IWC	403	4	20.7	0	0	0.58
10	125	147	~~2~~ 1	20.9	0	0	0.36
02	109	243	3	20.6	0	0	0.82
15	99.7	138	1	20.7	0	0	0.10
06	89.4	~~332~~ 228	8	19.1	0	0	1.41
03	93.6	~~238~~ 332	23	18.9	0	0	1.56

Manifold	vac IWC	Flow
01	13.0	53
10	13.5	69
02	12.5	84
15	11.5	43
06	11.5	26
03	12.0	19

Pre filter vac: 15.0
Post filter vac: 15.5
Diff press: 2.5

Hours
Blower 75.8
Pump 1.2

Exhaust Temp 175

pump pressure 5 PSF

pump volume 99998523.9

	PID	CH_4	O_2	H_2S	CO	CO_2
Influent	416	~~19.5~~ 4	19.8	0	0	1.34

Sample collected @ 1400

Influence
MW04 0.0 IWC
MW07 0.1 IWC

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE: 1-11-24 / 1-12-24
TIME ONSITE: 11:00

O&M PERSONNEL: DB
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: No — KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (take photo)	218.9	13:15
Transfer Pump Hours	4.6	
~~Pre-Filter Vacuum (IWC)~~ (inHg)	188.8 IWC	13.85 inHg
Post-Filter Vacuum (inHg)	14.5	
Differential Pressure (IWC)	1.75	(Flow)
Exhaust Temperature	170	
Transfer Pump Pressure	5 PSI	
Transfer Pump Totalizer	2,648.3	

(photo)
~~IWC~~
Pre-Filter Vac (inHg) = 14.5 °F
(photo)

INFLUENT VAC - Pre KO
- Maybe install a In Hg gauge.
- add caution - Hot sign
- graph on Filter For Flow says IWC, should be inHg?

14.5 inHg = 221 SCFM

Exhaust PID - 899 ppm

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 1-11-24
SAMPLE TIME:
PID (ppm) 993
OXYGEN (%) 19.8
CARBON DIOXIDE (%) 1.50
Analytes: Sample Bi-Monthly (every oth~~er~~ Sample Bi-Monthly (every other month) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)
OPERATING WELLS: ALL, MW-15 was frozen on 1-11

Change in Well Operation: NONE

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	DIFF PRESSURE (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	156		135		
MW02	111		392		
MW03	140		187		
MW06	110		323		
MW10	129		59		
MW15	~				

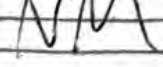
MANIFOLD MEASUREMENTS

Diff Press (IWC)

WELL ID	VACUUM (IHg)	FLOW (CFM)
MW01	11	0.95
MW02	11	6.5
MW03	13	1.3
MW06	11	~~1.1~~ 1.18
MW10		0.88
MW15	~	

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	



or we paste a conversion graph

COMMENTS/MAINTENANCE ISSUES

MW 15 Frozen

7-11-24

943 rm

Influent

		MW 01	02	03	06	10	15
CH_4	% LEL	1	3	1	1	1	7
Oxy	vol %	20.2	20.2	20.9	20.4	20.4	19.8
H_2S	ppm	0.0	0.0	0.0	0.0	0.0	0
CO	ppm	0	0	0	0	0	0
CO_2	vol %	0.28	0.76	0.52	0.42	0.30	1.50
CH_4	% LEL	6	0	1	1	6	6

Influent

CH_4	3% LEL
Oxy	19.7 vol %
H_2S	0.0 ppm
CO	0 ppm
CO_2	0.66 vol %
CH_4	6 % LEL

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE 1-18-24
TIME ONSITE 10:30

O&M PERSONNEL DB + PA
TIME OFFSITE

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: YES, system off upon arrived. Pulled float stem out transfer pump activated. Manually "hand" turned on pump to drain KO completely. KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (take photo)	375.7	14.05
Transfer Pump Hours	10.9	1406
Pre-Filter Vacuum (IHg)	13.5	
Post-Filter Vacuum (Ihg)	13	
Differential Pressure (IWC)	20	
Exhaust Temperature	155° F	
Transfer Pump Pressure	5 PSI	1406
Transfer Pump Totalizer	8510.0	1406
Pre KO Vac	177 INWC	1408
Freshair by Pass	0%	

photo

Compare filter - liquids observed

Exhaust PID - 1007 ppm

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 1-18-24
SAMPLE TIME: 15:15
PID (ppm) 234
OXYGEN (%) 20.4
CARBON DIOXIDE (%) 0.44
Analytes: Sample Bi-Monthly (every oth Sample Bi-Monthly (every other month) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)

OPERATING WELLS: All

Change in Well Operation: NONE

WELLHEAD MEASUREMENTS

Observable liquids

WELL ID	VACUUM (IWC)	~~DIFF PRESSURE (IWG)~~	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	140.0	Y	~~403~~ 655		
MW02	108	Y	535		
MW03	155	Y	452		
MW06	129.0	N	55		
MW10	122.8	Y	256		
MW15	177.0	N	124		

MANIFOLD MEASUREMENTS

DIFF Pressure (IWC)

WELL ID	VACUUM (IHg)	~~FLOW (CFM)~~
MW01	12.0	0.08
MW02	12.0	1.05
MW03	13.0	1.11
MW06	12.5	1.12
MW10	12.5	0.77
MW15	~~10.0~~ 12.0	3.78

COMMENTS/MAINTENANCE ISSUES

ADD observable liquids to manifold

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	

	MW 01	02	03	06	10	15	Influent
CH4 % LEL –	4	2	4	0	1	4	2
Oxy Vol % –	19.8	20.2	19.2	20.9	20.9	20.9	20.4
H_2S ppm	0.0	0	0	0	0.0	0.0	0
CO ppm	0.0	0	0	0	0.0	0.0	0
CO_2 Vol %	0.46	0.54	0.9	0.06	0.24	0.84	0.44
CH_y % LEL	3	1	3	0	1	3	1

234 ppm PID

1-18-24

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE 1-24-24
TIME ONSITE 1100

O&M PERSONNEL D. Burns
TIME OFFSITE

SVE SYSTEM - MONTHLY O&M

DPE ALARMS NA KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	518.2	1230
Transfer Pump Hours (photo)	14.2	
Influent Vacuum Pre-KO (InHg)	158 INC	
Fresh Air Bypass (% Open)	0	
Pre-Filter Vacuum (InHg)	12	
Post-Filter Vacuum (InHg)	12	
Differential Pressure (IWC)	2.5 ~ 80 SCFM	
Exhaust Temperature (°F)	160	
Exhaust PID (ppm)	1,607	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	12,336.8	

NOTES

MW-6 + 15 didn't have any flow upon arrival. Reset stingers, flow resumed.

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 1-24-24 SAMPLE TIME: 13:40
PID (ppm) 521 OXYGEN (%) 20.5 CARBON DIOXIDE (%) 0.56
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS All 6

Change in Well Operation: None

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	125	1,394	20.2	0.52
MW02	99	710	20.7	0.52
MW03	135	1,775	19.2	1.26
MW06	103	439	20.9	0.56
MW10	112	7	20.9	0.00
MW15	64	425	20.9	0.18
Influent		521		

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	11	Y	0.55
MW02	10.5	Y	0.75
MW03	13	Y	0.62
MW06	10.5	Y	0.40
MW10	~~10.5~~ 11	Y	0.62 ~~0.75~~
MW15	8.5	Y	0.18

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	0.00
MW07	1.06

COMMENTS/MAINTENANCE ISSUES

- carry over liquids still observed in air filter, post KO.
- shut down system to empty liquids out of air filter

1-24-24

	MW 01	02	03	06	10	15	Influent
CH_4 % LEL	7	3	9	2	0	1	4
Oxy vol %	20.2	20.7	19.2	20.9	20.9	20.9	20.5
H_2S ppm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO ppm	0	0	0	0	0	0	0
CO_2 vol %	0.52	0.52	1.26	0.56	0.00	0.18	0.56
CH_4 ppm	7	2	7	2	0	1	3

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE: 2-1-24
TIME ONSITE: 1000

O&M PERSONNEL: DB
TIME OFFSITE: ~~1405~~ 1420

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: NONE KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	706.6	11:00
Transfer Pump Hours (photo)	15.8	
Influent Vacuum Pre-KO (InHg)	7.5	
Fresh Air Bypass (% Open)	25%	
Pre-Filter Vacuum (InHg)	7.0	
Post-Filter Vacuum (InHg)	7.0	
Differential Pressure (IWC)	3.25	
Exhaust Temperature (°F)	140	
Exhaust PID (ppm)	397	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	14,170.3	

NOTES

No flow in 03, 06, & 15 upon arrival. Resumed flow prior to readings.

SVE SYSTEM SAMPLING

SAMPLE ID:	SAMPLE TIME:
PID (ppm)	OXYGEN (%) CARBON DIOXIDE (%)
Analytes:	Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS	01, 02, 03, 06, 10, 15

Change in Well Operation: None

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	68.0	468		
MW02	60.9	179		
MW03	60.3	644		
MW06	61.9	245		
MW10	64.0	435		
MW15	40.3	834		

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	5.5	Yes	0.54
MW02	6.0	Yes	0.15
MW03	8.5	No	0.24
MW06	5.5	Yes	0.17
MW10	5.0	Yes	0.21
MW15	6.0	No	0.12

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	

COMMENTS/MAINTENANCE ISSUES

-cleaned/scrubbed 03 sight tube of scale/hardness build up.

472 ppm

	Influent	01	02	03	06	10	15
CH_4 ppm	1,450	4,150	1,950	10,250	1,300	1,200	290
Oxy vol%	20.6	19.2	20.2	17.8	18.6	20.9	20.9
H_2S ppm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO ppm	0	0	0	19	13	0	6
CO_2 vol%	0.50	0.82	0.70	1.78	1.26	0.34	0.06
CH_4 %LEL	2	7	2	28	2	1	0

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE: 7-8-24
TIME ONSITE: 10:30

O&M PERSONNEL: EC + DA
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	874	10:39
Transfer Pump Hours (photo)	18.4	10:39
Influent Vacuum Pre-KO ~~(inHg)~~ IWC	110	
Fresh Air Bypass (% Open)	40	
Pre-Filter Vacuum (InHg)	9	
Post-Filter Vacuum (InHg)	8	
Differential Pressure (IWC)	3	
Exhaust Temperature (°F)	60	
Exhaust PID (ppm)	350	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	17328	

NOTES

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 7-8-24 SAMPLE TIME: 12:00
PID (ppm) 395 OXYGEN (%) 20.6 CARBON DIOXIDE (%) 0.48
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS

Change in Well Operation:

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	84.3	436	19.8	0.78
MW02	67.4	380	20.7	0.54
MW03	78.4	325	19.0	1.38
MW06	73.4	220	20.9	0.42
MW10	79.1	381	20.9	0.32
MW15	55.0	89.6	20.9	0.06

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	7.00	yes	10.5
MW02	7.25	Yes	11
MW03	9.50	Yes	9
MW06	7.00	Yes	10
MW10	7.00	Yes	11
MW15	4.95	Yes	9

COMMENTS/MAINTENANCE ISSUES

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	0.0
MW07	0.1

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE: 2/15/24
TIME ONSITE: 1030

O&M PERSONNEL: PA
TIME OFFSITE: 1445

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	1039.8	1040
Transfer Pump Hours (photo)	21.5	1044
Influent Vacuum Pre-KO (InHg)	8.5	1045
Fresh Air Bypass (% Open)	40	10.46
Pre-Filter Vacuum (InHg)	8.5	1047
Post-Filter Vacuum (InHg)	7.6	1047
Differential Pressure (IWC)	3.0	1048
Exhaust Temperature (°F)	145.0	1200
Exhaust PID (ppm)	401.4	1049
Transfer Pump Pressure (PSI)	5.0	1043
Transfer Pump Totalizer (Gal) (photo)	21029.2	

NOTES

SVE SYSTEM SAMPLING

SAMPLE ID: SAMPLE TIME:
PID (ppm) OXYGEN (%) CARBON DIOXIDE (%)
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS

Change in Well Operation:

Prior to Clearing H2O for 3rd Time

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	~~93.8~~	~~127~~ 41.28	~~20.9~~ 19.8	~~0.0~~ 0.44
MW02	~~73.1~~	231.8	20.3	0.32
MW03	~~72.7~~ 0.6	120.3	20.9	0.12
MW06	~~3.7~~ 3.4 ← 107.0	234.5	20.3	0.28
MW10	74	~~172.4~~ 205.3	~~20.9~~ 20.6	0.18
MW15	8.0 ← 107.1	25.2	20.9	0.08

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	7.0	Yes	0.2
MW02	7.5	Yes	0.21
MW03	10	Yes	0.23
MW06	7.0	Yes	0.15
MW10	7.0	Yes	~~0.5~~ 0.05
MW15	7.	~~No~~ yes	0.05

Liquids flowing down sight tubes

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	0.00
MW07	0.02
MW05	0.55

COMMENTS/MAINTENANCE ISSUES

Wells 15 & 03 no pressure @ Wellhead - Clogged from water @ manifold - Can visibly see water draining down sight tubes from other wells

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE: 2/21/24
TIME ONSITE: 1000

O&M PERSONNEL: PA
TIME OFFSITE: 1330

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	1183.1	1005
Transfer Pump Hours (photo)	24.0	1005
Influent Vacuum Pre-KO (InHg)	8.4	1009
Fresh Air Bypass (% Open)	40	1008
Pre-Filter Vacuum (InHg)	8.5	1008
Post-Filter Vacuum (InHg)	7.5	1008
Differential Pressure (IWC)	3.0	1008
Exhaust Temperature (°F)	142	1007
Exhaust PID (ppm)	399.8	1040
Transfer Pump Pressure (PSI)	5	1007
Transfer Pump Totalizer (Gal) (photo)	23,8658	1006

-4279

NOTES

W/ All wells on

SVE SYSTEM SAMPLING

SAMPLE ID:
SAMPLE TIME:
PID (ppm)
OXYGEN (%)
CARBON DIOXIDE (%)
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS

Change in Well Operation: Wells 15 & 03 Shut off @ manifold

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	85.5	543.1	20.0	0.40
MW02	73.3	175.2	20.6	0.18
MW03	95.2	498.3	19.1	0.72
MW06	73.0	318.8	20.6	0.20
MW10	79.4	204.4	20.7	0.16
MW15	108.0	57.0	20.9	0.08
Influent		433.3	20.0	0.38

- Wells 01, 02, 03, 10 Collected O&M Samples while 03 & 15 Shut off
- opened 03 & 15, Cleared H2O from lines then Collected Samples and Influent Sample

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	7.0	Y	0.20
MW02	7.0	Y	0.15
MW03			
MW06	7.2	Y	0.22
MW10	7.0	Y	0.03
MW15			

INFLUENCE

WELL ID	VACUUM (IWC)
MW~~05~~ 07	0.05
MW~~06~~ 04	0.01
MW05	0.59

COMMENTS/MAINTENANCE ISSUES

Turned Back off 15 & 03 after ~~In~~fluent Sample Collected

attempted to remove 90° above ko Tank to Put mesh in ko Tank but needed more/Different tools

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE 3-1-24
TIME ONSITE 1000

O&M PERSONNEL D. Burns
TIME OFFSITE 1500

SVE SYSTEM - MONTHLY O&M

DPE ALARMS None KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo) 1399.3	~~13220~~	1320
Transfer Pump Hours (photo)	27.8	
Influent Vacuum Pre-KO (InHg)	10.5	
Fresh Air Bypass (% Open)	0	
Pre-Filter Vacuum (InHg)	12.0	
Post-Filter Vacuum (InHg)	10.5	
Differential Pressure (IWC)	2.25	
Exhaust Temperature (°F)	170	
Exhaust PID (ppm)	662	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	28,033.7	

NOTES

Turned vac up.
MW 03 + 15 on
Added demister mesh
on top of KO tank

SVE SYSTEM SAMPLING

SAMPLE ID:
SAMPLE TIME:
PID (ppm) 269 OXYGEN (%) 20.9 CARBON DIOXIDE (%) 0.36
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS All

Change in Well Operation: ~~None~~

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%) vol	CARBON DIOXIDE vol (%)	%LEL CH_4	PPM H_2S	PPM CO	PPM CH_4
MW01	107	353	20.5	0.44	4	0.0	0	1,950
MW02	~~91~~ 91	315	20.9	0.36	2	0.0	0	1,250
MW03	92	404	19.7	1.04	6	0.0	0	3650
MW06	~~93~~ 93	~~121~~ 121	20.9	0.24	2	0.0	0	780
MW10	101	91	20.9	0.12	0	0.0	0	470
MW15	137	129	20.9	0.00	0	0.0	0	620
		Inlet: 269	20.9	0.36	3	0.0	0	1,950

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS (IWC)
MW01	9	Y	0.28
MW02	9	Y	0.56
MW03	12	Y	0.13
MW06	9	Y	0.04
MW10	9	Y	0.12
MW15	9	Y	0.07

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	

COMMENTS/MAINTENANCE ISSUES

ENSOLUM

STANDARD 1A DPE SYSTEM
O&M FORM

DATE 3-7-24
TIME ONSITE 1300

O&M PERSONNEL D. Burns
TIME OFFSITE

SVE SYSTEM - MONTHLY O&M

DPE ALARMS NA KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	1,544.7	1450
Transfer Pump Hours (photo)	32.0	
Influent Vacuum Pre-KO (InHg)	10.25	
Fresh Air Bypass (% Open)	0	
Pre-Filter Vacuum (InHg)	12.0	
Post-Filter Vacuum (InHg)	10.25	
Differential Pressure (IWC)	2.25	
Exhaust Temperature (°F)	170	
Exhaust PID (ppm)	525	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	32076.1	

NOTES

MW 15 not flowing upon arrival. Reset flow and added a bit of fresh air via open camlock (loose, not completely sealed) to try + keep flow

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 3-7-24 SAMPLE TIME: 14:45
PID (ppm) 453 OXYGEN (%) 20.9 CARBON DIOXIDE (%) 0.30
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)
OPERATING WELLS All

Change in Well Operation:

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (Vol %)	CARBON DIOXIDE (Vol %)	ppm ~~%LEL~~ CH_4	ppm H_2S	ppm CO	%LEL ~~ppm~~ CH_4
MW01	110.0	431	20.9	0.36	2,600	0.0	0	4
MW02	90.4	396	20.9	0.24	1,050	0.0	0	2
MW03	114.2	721	20.2	0.66	3,400	0.0	0	7
MW06	93.5	314	20.9	0.16	810	0.0	0	2
MW10	99.8	60	20.9	0.18	980	0.0	0	1
MW15	132.7	114	20.9	0.00	350	0.0	0	1
Influent		453	20.9	0.30	1,450	0.0	0	2

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF PRESS (IWC)
MW01	9	Y	0.51
MW02	9	Y	0.64
MW03	11.5	Y	0.41
MW06	9	Y	0.65
MW10	9	Y	0.34
MW15	9	Y	0.16

COMMENTS/MAINTENANCE ISSUES

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	

ENSOLUM

4

STANDARD 1A DPE SYSTEM
O&M FORM

DATE 3-14-24
TIME ONSITE 12:00

O&M PERSONNEL D. Burns
TIME OFFSITE

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	1710.1	1305
Transfer Pump Hours (photo)	36.6	
Influent Vacuum Pre-KO (InHg)	10.5	
Fresh Air Bypass (% Open)	0	
Pre-Filter Vacuum (InHg)	12.25	
Post-Filter Vacuum (InHg)	10.5	
Differential Pressure (IWC)	2.5	
Exhaust Temperature (°F)	160	
Exhaust PID (ppm)	763	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	36361.7	

NOTES

MW 15 flowing now.

Cleaned float stem

SVE SYSTEM SAMPLING

SAMPLE ID: None collected this visit for submission
SAMPLE TIME:
PID (ppm): 504
OXYGEN (%) 20.9
CARBON DIOXIDE (%) 0.28
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2)

OPERATING WELLS: All wells on.

Change in Well Operation: None

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)	ppm CH_4	ppm H_2S	ppm CO	% LEL CH_4
MW01	108	409	20.9	0.38	3,050	0.0	0	4
MW02	91	412	20.9	0.20	1,100	0.0	0	2
MW03	110	687	20.4	0.44	3,500	0.0	0	6
MW06	94	402	20.9	0.20	800	0.0	0	2
MW10	100	75	20.9	0.16	750	0.0	0	1
MW15	132	130	20.9	0.00	410	0.0	0	1
Influent		504	20.9	0.28	1,500	0.0	0	2

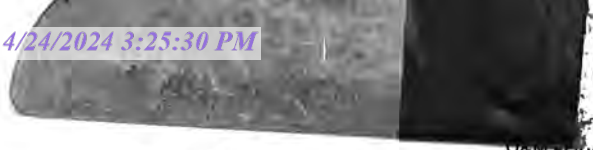
MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF PRESS (IWC)
MW01	9.0	Y	0.19
MW02	9.0	Y	0.64
MW03	11.5	Y	0.35
MW06	9.0	Y	0.30
MW10	9.0	Y	0.57
MW15	9.0	Y	0.13

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	
MW07	

COMMENTS/MAINTENANCE ISSUES



U M

O&M FORM

DATE: 3-21-24
TIME ONSITE: 10:30

O&M PERSONNEL: E. Carroll
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

DPE ALARMS: KO TANK HIGH LEVEL

DPE SYSTEM	READING	TIME
Blower Hours (photo)	1875.9	10:52
Transfer Pump Hours (photo)	41.0	10:52
Influent Vacuum Pre-KO (InHg)	10.5	
Fresh Air Bypass (% Open)	0	
Pre-Filter Vacuum (InHg)	12.0	
Post-Filter Vacuum (InHg)	11.0	
Differential Pressure (IWC)	2.5	
Exhaust Temperature (°F)	170	
Exhaust PID (ppm)	568	
Transfer Pump Pressure (PSI)	5	
Transfer Pump Totalizer (Gal) (photo)	40443.4	

NOTES

SVE SYSTEM SAMPLING

SAMPLE ID: Influent 3-21
PID (ppm) 458 OXYGEN (%) 20.9 SAMPLE TIME: 11:40
Analytes: Sample Bi-Monthly (every other month) for TVPH (8015), 8260 - Full List VOCs, Fixed Gas (CO2 AND O2) CARBON DIOXIDE (%) 0.28
OPERATING WELLS: All Wells

Change in Well Operation: None

WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IWC)	PID HEADSPACE (PPM)	OXYGEN (%)	CARBON DIOXIDE (%)
MW01	108	398	20.9	0.36
MW02	91	408	20.9	0.18
MW03	109	627	20.3	0.45
MW06	93	372	20.9	0.15
MW10	100	77	20.9	0.13
MW15	131	122	20.9	0.00

MANIFOLD MEASUREMENTS

WELL ID	VACUUM (InHg)	SEE LIQUIDS? (YES/NO)	DIFF. PRESS. (IWC)
MW01	9	Y	0.49
MW02	9	Y	0.61
MW03	~~9~~ 11.5	Y	0.36
MW06	8.5	Y	0.27
MW10	9	Y	0.48
MW15	~~11.5~~ 9	Y	0.13

COMMENTS/MAINTENANCE ISSUES

INFLUENCE

WELL ID	VACUUM (IWC)
MW04	NM
MW07	NM

ENSOLUM

APPENDIX B

Project Photographs

PROJECT PHOTOGRAPHS
Standard #1
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1 Runtime meter taken on January 3, 2024 at 2:02 PM Hours = 28.1	
Photograph 2 Runtime meter taken on March 21, 2024 at 10:52 AM Hours = 1,875.9	

Ensolum, LLC | Environmental & Hydrogeologic Consultants
Durango, Colorado | info@ensolum.com

PROJECT PHOTOGRAPHS
Standard #1
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 3 Runtime meter taken on January 11, 2024 at 1:15 PM Gallons = 2,648.3	
Photograph 4 Totalizer taken on March 21, 2024 at 10:52 AM Gallons = 40,443.4	

ENSOLUM

APPENDIX C

DPE Laboratory Analytical Reports

eurofins | Environment Testing

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

January 24, 2024

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

RE: Standard 1A OrderNo.: 2401141

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 2 sample(s) on 1/4/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401141**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-2-24
Project: Standard 1A
Collection Date: 1/2/2024 2:10:00 PM
Lab ID: 2401141-001 **Matrix:** AIR
Received Date: 1/4/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	170	5.0		µg/L	1	1/5/2024 1:47:55 PM
Surr: BFB	409	15-412		%Rec	1	1/5/2024 1:47:55 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	0.58	0.10		µg/L	1	1/16/2024 11:25:09 AM
Toluene	2.8	0.10		µg/L	1	1/16/2024 11:25:09 AM
Ethylbenzene	0.42	0.10		µg/L	1	1/16/2024 11:25:09 AM
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2,4-Trimethylbenzene	0.79	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,3,5-Trimethylbenzene	0.51	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Naphthalene	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
1-Methylnaphthalene	ND	0.40		µg/L	1	1/16/2024 11:25:09 AM
2-Methylnaphthalene	ND	0.40		µg/L	1	1/16/2024 11:25:09 AM
Acetone	ND	1.0		µg/L	1	1/16/2024 11:25:09 AM
Bromobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Bromodichloromethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Bromoform	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Bromomethane	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
2-Butanone	ND	1.0		µg/L	1	1/16/2024 11:25:09 AM
Carbon disulfide	ND	1.0		µg/L	1	1/16/2024 11:25:09 AM
Carbon tetrachloride	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Chlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Chloroethane	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
Chloroform	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Chloromethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
2-Chlorotoluene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
4-Chlorotoluene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
cis-1,2-DCE	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
Dibromochloromethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Dibromomethane	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
1,2-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,3-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,4-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Dichlorodifluoromethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1-Dichloroethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1-Dichloroethene	ND	0.10		µg/L	1	1/16/2024 11:25:09 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	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.

Analytical Report
Lab Order **2401141**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-2-24
Project: Standard 1A
Collection Date: 1/2/2024 2:10:00 PM
Lab ID: 2401141-001 **Matrix:** AIR
Received Date: 1/4/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,2-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,3-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
2,2-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Hexachlorobutadiene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
2-Hexanone	ND	1.0		µg/L	1	1/16/2024 11:25:09 AM
Isopropylbenzene	0.11	0.10		µg/L	1	1/16/2024 11:25:09 AM
4-Isopropyltoluene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
4-Methyl-2-pentanone	ND	1.0		µg/L	1	1/16/2024 11:25:09 AM
Methylene chloride	ND	0.30		µg/L	1	1/16/2024 11:25:09 AM
n-Butylbenzene	ND	0.30		µg/L	1	1/16/2024 11:25:09 AM
n-Propylbenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
sec-Butylbenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Styrene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
tert-Butylbenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
trans-1,2-DCE	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1,1-Trichloroethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,1,2-Trichloroethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Trichloroethene (TCE)	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Trichlorofluoromethane	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
1,2,3-Trichloropropane	ND	0.20		µg/L	1	1/16/2024 11:25:09 AM
Vinyl chloride	ND	0.10		µg/L	1	1/16/2024 11:25:09 AM
Xylenes, Total	8.9	0.15		µg/L	1	1/16/2024 11:25:09 AM
Surr: Dibromofluoromethane	76.7	70-130		%Rec	1	1/16/2024 11:25:09 AM
Surr: 1,2-Dichloroethane-d4	82.9	70-130		%Rec	1	1/16/2024 11:25:09 AM
Surr: Toluene-d8	103	70-130		%Rec	1	1/16/2024 11:25:09 AM
Surr: 4-Bromofluorobenzene	121	70-130		%Rec	1	1/16/2024 11:25:09 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	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.		

Analytical Report
Lab Order **2401141**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-3-24
Project: Standard 1A
Collection Date: 1/3/2024 1:45:00 PM
Lab ID: 2401141-002 **Matrix:** AIR
Received Date: 1/4/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	69	5.0		µg/L	1	1/5/2024 3:23:01 PM
Surr: BFB	252	15-412		%Rec	1	1/5/2024 3:23:01 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	0.21	0.10		µg/L	1	1/16/2024 12:20:10 PM
Toluene	1.2	0.10		µg/L	1	1/16/2024 12:20:10 PM
Ethylbenzene	0.24	0.10		µg/L	1	1/16/2024 12:20:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2,4-Trimethylbenzene	0.44	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,3,5-Trimethylbenzene	0.30	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Naphthalene	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
1-Methylnaphthalene	ND	0.40		µg/L	1	1/16/2024 12:20:10 PM
2-Methylnaphthalene	ND	0.40		µg/L	1	1/16/2024 12:20:10 PM
Acetone	ND	1.0		µg/L	1	1/16/2024 12:20:10 PM
Bromobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Bromodichloromethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Bromoform	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Bromomethane	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
2-Butanone	ND	1.0		µg/L	1	1/16/2024 12:20:10 PM
Carbon disulfide	ND	1.0		µg/L	1	1/16/2024 12:20:10 PM
Carbon tetrachloride	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Chlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Chloroethane	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
Chloroform	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Chloromethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
2-Chlorotoluene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
4-Chlorotoluene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
cis-1,2-DCE	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
Dibromochloromethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Dibromomethane	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
1,2-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,3-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,4-Dichlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Dichlorodifluoromethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1-Dichloroethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1-Dichloroethene	ND	0.10		µg/L	1	1/16/2024 12:20:10 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2401141**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-3-24
Project: Standard 1A
Collection Date: 1/3/2024 1:45:00 PM
Lab ID: 2401141-002 **Matrix:** AIR **Received Date:** 1/4/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,2-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,3-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
2,2-Dichloropropane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Hexachlorobutadiene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
2-Hexanone	ND	1.0		µg/L	1	1/16/2024 12:20:10 PM
Isopropylbenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
4-Isopropyltoluene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
4-Methyl-2-pentanone	ND	1.0		µg/L	1	1/16/2024 12:20:10 PM
Methylene chloride	ND	0.30		µg/L	1	1/16/2024 12:20:10 PM
n-Butylbenzene	ND	0.30		µg/L	1	1/16/2024 12:20:10 PM
n-Propylbenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
sec-Butylbenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Styrene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
tert-Butylbenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
trans-1,2-DCE	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1,1-Trichloroethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,1,2-Trichloroethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Trichloroethene (TCE)	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Trichlorofluoromethane	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
1,2,3-Trichloropropane	ND	0.20		µg/L	1	1/16/2024 12:20:10 PM
Vinyl chloride	ND	0.10		µg/L	1	1/16/2024 12:20:10 PM
Xylenes, Total	5.0	0.15		µg/L	1	1/16/2024 12:20:10 PM
Surr: Dibromofluoromethane	81.1	70-130		%Rec	1	1/16/2024 12:20:10 PM
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%Rec	1	1/16/2024 12:20:10 PM
Surr: Toluene-d8	106	70-130		%Rec	1	1/16/2024 12:20:10 PM
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	1/16/2024 12:20:10 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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ANALYTICAL SUMMARY REPORT

January 11, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24010337 Quote ID: B15626

Project Name: Tedlar Gas Analysis

Energy Laboratories Inc Billings MT received the following 2 samples for Hall Environmental on 1/5/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24010337-001	24011141-001B, Influent 1-2-24	01/02/24 14:10	01/05/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60
B24010337-002	2401141-002B, Influent 1-3-24	01/03/24 13:45	01/05/24	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Tedlar Gas Analysis
Lab ID: B24010337-001
Client Sample ID: 24011141-001B, Influent 1-2-24

Report Date: 01/11/24
Collection Date: 01/02/24 14:10
DateReceived: 01/05/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.64	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Nitrogen	78.26	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Carbon Dioxide	0.09	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Methane	0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Hexanes plus	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 01:34 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
Hexanes plus	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
GPM Total	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
GPM Pentanes plus	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 01:34 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	ND			1		GPA 2261-95	01/09/24 01:34 / jrj
Net BTU per cu ft @ std cond. (LHV)	ND			1		GPA 2261-95	01/09/24 01:34 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	01/09/24 01:34 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	01/09/24 01:34 / jrj
Specific Gravity @ 60/60F	0.998			0.001		D3588-81	01/09/24 01:34 / jrj
Air, %	98.86			0.01		GPA 2261-95	01/09/24 01:34 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	01/09/24 01:34 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Tedlar Gas Analysis
Lab ID: B24010337-002
Client Sample ID: 2401141-002B, Influent 1-3-24

Report Date: 01/11/24
Collection Date: 01/03/24 13:45
DateReceived: 01/05/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.71	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Nitrogen	78.22	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Carbon Dioxide	0.06	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Methane	0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Hexanes plus	<0.01	Mol %		0.01		GPA 2261-95	01/09/24 02:31 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
Hexanes plus	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
GPM Total	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
GPM Pentanes plus	< 0.001	gpm		0.001		GPA 2261-95	01/09/24 02:31 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	ND			1		GPA 2261-95	01/09/24 02:31 / jrj
Net BTU per cu ft @ std cond. (LHV)	ND			1		GPA 2261-95	01/09/24 02:31 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	01/09/24 02:31 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	01/09/24 02:31 / jrj
Specific Gravity @ 60/60F	0.998			0.001		D3588-81	01/09/24 02:31 / jrj
Air, %	99.18			0.01		GPA 2261-95	01/09/24 02:31 / jrj
- The analysis was not corrected for air.							

COMMENTS

-						-	01/09/24 02:31 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24010337 **Report Date:** 01/11/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R414891
Lab ID: **LCS010924**	11	Laboratory Control Sample				Run: GCNGA-B_240109A				01/09/24 03:25
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		6.34	Mol %	0.01	106	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		74.4	Mol %	0.01	100	70	130			
Ethane		6.02	Mol %	0.01	100	70	130			
Propane		5.00	Mol %	0.01	101	70	130			
Isobutane		1.77	Mol %	0.01	88	70	130			
n-Butane		1.99	Mol %	0.01	99	70	130			
Isopentane		1.00	Mol %	0.01	100	70	130			
n-Pentane		1.00	Mol %	0.01	100	70	130			
Hexanes plus		0.81	Mol %	0.01	101	70	130			
Lab ID: **B24010204-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240109A				01/09/24 10:44
Oxygen		21.7	Mol %	0.01				0.0	20	
Nitrogen		78.2	Mol %	0.01				0.0	20	
Carbon Dioxide		0.05	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		<0.01	Mol %	0.01					20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24010337

Login completed by: Crystal M. Jones
Date Received: 1/5/2024
Reviewed by: dharris
Received by: cmj
Reviewed Date: 1/5/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	12.0°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

eurofins | Environment Testing

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR: **Energy Labs -Billings**	COMPANY: **Energy Laboratories**		PHONE: **(406) 869-6253**	FAX: **(406) 252-6069**	
ADDRESS: **1120 South 27th Street**			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: **Billings, MT 59107**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2401141-001B	Influent 1-2-24	TEDLAR	Air	1/2/2024 2:10:00 PM	1	Natural Gas Analysis- 02,CO2,CO
2	2401141-002B	Influent 1-3-24	TEDLAR	Air	1/3/2024 1:45:00 PM	1	Natural Gas Analysis- 02,CO2,CO

B24010337

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 1/4/2024	Time: 8:57 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Crystal Tafoya	Date: 1/5/24	Time: 0935

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ____ ℃ Attempt to Cool ? ____
Comments: ____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401141**

24-Jan-24

Client: HILCORP ENERGY

Project: Standard 1A

Sample ID: **2401141-001adup**	SampType: **DUP**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Influent 1-2-24**	Batch ID: **GA102272**	RunNo: **102272**
Prep Date:	Analysis Date: **1/5/2024**	SeqNo: **3775874** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	170	5.0						3.36	20	
Surr: BFB	8000		2000		398	15	412	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2401141**

24-Jan-24

Client: HILCORP ENERGY

Project: Standard 1A

Sample ID: **2401141-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 1-2-24**	Batch ID: **R102470**	RunNo: **102470**
Prep Date:	Analysis Date: **1/16/2024**	SeqNo: **3785172** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.61	0.10						6.21	20	
Toluene	2.9	0.10						2.39	20	
Ethylbenzene	0.42	0.10						0.0576	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	0.80	0.10						0.418	20	
1,3,5-Trimethylbenzene	0.51	0.10						0.487	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

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#: **2401141**

24-Jan-24

Client: HILCORP ENERGY

Project: Standard 1A

Sample ID: **2401141-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 1-2-24**	Batch ID: **R102470**	RunNo: **102470**
Prep Date:	Analysis Date: **1/16/2024**	SeqNo: **3785172** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	0.11	0.10						0.983	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	ND	0.10						0	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	9.0	0.15						1.73	20	
Surr: Dibromofluoromethane	0.77		1.000		76.9	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.87		1.000		87.2	70	130	0	0	
Surr: Toluene-d8	1.1		1.000		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.1		1.000		113	70	130	0	0	

Qualifiers:

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

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Eurofins Environment Testing South Central, LLC
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: **2401141** RcptNo: **1**

Received By: **Tracy Casarrubias** **1/4/2024 7:00:00 AM**

Completed By: **Tracy Casarrubias** **1/4/2024 8:47:49 AM**

Reviewed By: TMC 1/4/24

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: TMC 1/4/24

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: Mailing address and phone number are missing on COC- TMC 1/4/24

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mitch Killough

Mailing Address:

Phone #:

email or Fax#: MKillough@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard 1A

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp(Including CF): N/A (°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. 2401141	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)	O_2, CO, CO_2
1-2-24	14:10	Air	Influent 1-2-24	2 Tedlar		001		X						X			X
1-3-24	13:45	Air	Influent 1-3-24	2 Tedlar		002		X						X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1-3-24	14:40			courier	1/4/24	7:00
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

CC: ecarroll@ensolum.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.

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/23/2024 9:56:53 AM

JOB DESCRIPTION

Standard #1

JOB NUMBER

885-779-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

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

Generated
3/23/2024 9:56:53 AM

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

Client: Hilcorp Energy
Project/Site: Standard #1

Laboratory Job ID: 885-779-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: Standard #1

Job ID: 885-779-1

Job ID: 885-779-1 Eurofins Albuquerque

Job Narrative
885-779-1

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 sample was received on 3/8/2024 7:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C.

Subcontract Work
Method Fixed Gases: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

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

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Client Sample ID: Influent 3-7-24

Date Collected: 03/07/24 14:45
Date Received: 03/08/24 07:00
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-779-1

Matrix: Air

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2100		250		ug/L			03/13/24 13:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*03/13/24 13:51*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			03/13/24 13:51	50
1,1,1-Trichloroethane	ND		5.0		ug/L			03/13/24 13:51	50
1,1,2,2-Tetrachloroethane	ND		10		ug/L			03/13/24 13:51	50
1,1,2-Trichloroethane	ND		5.0		ug/L			03/13/24 13:51	50
1,1-Dichloroethane	ND		5.0		ug/L			03/13/24 13:51	50
1,1-Dichloroethene	ND		5.0		ug/L			03/13/24 13:51	50
1,1-Dichloropropene	ND		5.0		ug/L			03/13/24 13:51	50
1,2,3-Trichlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,2,3-Trichloropropane	ND		10		ug/L			03/13/24 13:51	50
1,2,4-Trichlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,2,4-Trimethylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			03/13/24 13:51	50
1,2-Dibromoethane (EDB)	ND		5.0		ug/L			03/13/24 13:51	50
1,2-Dichlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,2-Dichloroethane (EDC)	ND		5.0		ug/L			03/13/24 13:51	50
1,2-Dichloropropane	ND		5.0		ug/L			03/13/24 13:51	50
1,3,5-Trimethylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,3-Dichlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
1,3-Dichloropropane	ND		5.0		ug/L			03/13/24 13:51	50
1,4-Dichlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
1-Methylnaphthalene	ND		20		ug/L			03/13/24 13:51	50
2,2-Dichloropropane	ND		10		ug/L			03/13/24 13:51	50
2-Butanone	ND		50		ug/L			03/13/24 13:51	50
2-Chlorotoluene	ND		5.0		ug/L			03/13/24 13:51	50
2-Hexanone	ND		50		ug/L			03/13/24 13:51	50
2-Methylnaphthalene	ND		20		ug/L			03/13/24 13:51	50
4-Chlorotoluene	ND		5.0		ug/L			03/13/24 13:51	50
4-Isopropyltoluene	ND		5.0		ug/L			03/13/24 13:51	50
4-Methyl-2-pentanone	ND		50		ug/L			03/13/24 13:51	50
Acetone	ND		50		ug/L			03/13/24 13:51	50
Benzene	14		5.0		ug/L			03/13/24 13:51	50
Bromobenzene	ND		5.0		ug/L			03/13/24 13:51	50
Bromodichloromethane	ND		5.0		ug/L			03/13/24 13:51	50
Dibromochloromethane	ND		5.0		ug/L			03/13/24 13:51	50
Bromoform	ND		5.0		ug/L			03/13/24 13:51	50
Bromomethane	ND		15		ug/L			03/13/24 13:51	50
Carbon disulfide	ND		50		ug/L			03/13/24 13:51	50
Carbon tetrachloride	ND		5.0		ug/L			03/13/24 13:51	50
Chlorobenzene	ND		5.0		ug/L			03/13/24 13:51	50
Chloroethane	ND		10		ug/L			03/13/24 13:51	50
Chloroform	ND		5.0		ug/L			03/13/24 13:51	50

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Client Sample ID: Influent 3-7-24

Date Collected: 03/07/24 14:45
Date Received: 03/08/24 07:00
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-779-1

Matrix: Air

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		15		ug/L			03/13/24 13:51	50
cis-1,2-Dichloroethene	ND		5.0		ug/L			03/13/24 13:51	50
cis-1,3-Dichloropropene	ND		5.0		ug/L			03/13/24 13:51	50
Dibromomethane	ND		5.0		ug/L			03/13/24 13:51	50
Dichlorodifluoromethane	ND		5.0		ug/L			03/13/24 13:51	50
Ethylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
Hexachlorobutadiene	ND		5.0		ug/L			03/13/24 13:51	50
Isopropylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
Methyl-tert-butyl Ether (MTBE)	ND		5.0		ug/L			03/13/24 13:51	50
Methylene Chloride	ND		15		ug/L			03/13/24 13:51	50
n-Butylbenzene	ND		15		ug/L			03/13/24 13:51	50
N-Propylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
Naphthalene	ND		10		ug/L			03/13/24 13:51	50
sec-Butylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
Styrene	ND		5.0		ug/L			03/13/24 13:51	50
tert-Butylbenzene	ND		5.0		ug/L			03/13/24 13:51	50
Tetrachloroethene (PCE)	ND		5.0		ug/L			03/13/24 13:51	50
Toluene	**28**		5.0		ug/L			03/13/24 13:51	50
trans-1,2-Dichloroethene	ND		5.0		ug/L			03/13/24 13:51	50
trans-1,3-Dichloropropene	ND		5.0		ug/L			03/13/24 13:51	50
Trichloroethene (TCE)	ND		5.0		ug/L			03/13/24 13:51	50
Trichlorofluoromethane	ND		5.0		ug/L			03/13/24 13:51	50
Vinyl chloride	ND		5.0		ug/L			03/13/24 13:51	50
Xylenes, Total	**36**		7.5		ug/L			03/13/24 13:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*03/13/24 13:51*	*50*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/13/24 13:51*	*50*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/13/24 13:51*	*50*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/13/24 13:51*	*50*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Method: 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-1932/3
Matrix: Air
Analysis Batch: 1932

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		50		ug/L			03/13/24 12:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*03/13/24 12:13*	*1*

Lab Sample ID: LCS 885-1932/2
Matrix: Air
Analysis Batch: 1932

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			500	505		ug/L		101			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 885-1708/3
Matrix: Air
Analysis Batch: 1708

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			03/13/24 12:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			03/13/24 12:13	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			03/13/24 12:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			03/13/24 12:13	1
1,1-Dichloroethane	ND		1.0		ug/L			03/13/24 12:13	1
1,1-Dichloroethene	ND		1.0		ug/L			03/13/24 12:13	1
1,1-Dichloropropene	ND		1.0		ug/L			03/13/24 12:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,2,3-Trichloropropane	ND		2.0		ug/L			03/13/24 12:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			03/13/24 12:13	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			03/13/24 12:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,2-Dichloroethane (EDC)	ND		1.0		ug/L			03/13/24 12:13	1
1,2-Dichloropropane	ND		1.0		ug/L			03/13/24 12:13	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
1,3-Dichloropropane	ND		1.0		ug/L			03/13/24 12:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
1-Methylnaphthalene	ND		4.0		ug/L			03/13/24 12:13	1
2,2-Dichloropropane	ND		2.0		ug/L			03/13/24 12:13	1
2-Butanone	ND		10		ug/L			03/13/24 12:13	1
2-Chlorotoluene	ND		1.0		ug/L			03/13/24 12:13	1
2-Hexanone	ND		10		ug/L			03/13/24 12:13	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

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

Lab Sample ID: MB 885-1708/3
Matrix: Air
Analysis Batch: 1708

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		4.0		ug/L			03/13/24 12:13	1
4-Chlorotoluene	ND		1.0		ug/L			03/13/24 12:13	1
4-Isopropyltoluene	ND		1.0		ug/L			03/13/24 12:13	1
4-Methyl-2-pentanone	ND		10		ug/L			03/13/24 12:13	1
Acetone	ND		10		ug/L			03/13/24 12:13	1
Benzene	ND		1.0		ug/L			03/13/24 12:13	1
Bromobenzene	ND		1.0		ug/L			03/13/24 12:13	1
Bromodichloromethane	ND		1.0		ug/L			03/13/24 12:13	1
Dibromochloromethane	ND		1.0		ug/L			03/13/24 12:13	1
Bromoform	ND		1.0		ug/L			03/13/24 12:13	1
Bromomethane	ND		3.0		ug/L			03/13/24 12:13	1
Carbon disulfide	ND		10		ug/L			03/13/24 12:13	1
Carbon tetrachloride	ND		1.0		ug/L			03/13/24 12:13	1
Chlorobenzene	ND		1.0		ug/L			03/13/24 12:13	1
Chloroethane	ND		2.0		ug/L			03/13/24 12:13	1
Chloroform	ND		1.0		ug/L			03/13/24 12:13	1
Chloromethane	ND		3.0		ug/L			03/13/24 12:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			03/13/24 12:13	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			03/13/24 12:13	1
Dibromomethane	ND		1.0		ug/L			03/13/24 12:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/13/24 12:13	1
Ethylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
Hexachlorobutadiene	ND		1.0		ug/L			03/13/24 12:13	1
Isopropylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0		ug/L			03/13/24 12:13	1
Methylene Chloride	ND		3.0		ug/L			03/13/24 12:13	1
n-Butylbenzene	ND		3.0		ug/L			03/13/24 12:13	1
N-Propylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
Naphthalene	ND		2.0		ug/L			03/13/24 12:13	1
sec-Butylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
Styrene	ND		1.0		ug/L			03/13/24 12:13	1
tert-Butylbenzene	ND		1.0		ug/L			03/13/24 12:13	1
Tetrachloroethene (PCE)	ND		1.0		ug/L			03/13/24 12:13	1
Toluene	ND		1.0		ug/L			03/13/24 12:13	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			03/13/24 12:13	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			03/13/24 12:13	1
Trichloroethene (TCE)	ND		1.0		ug/L			03/13/24 12:13	1
Trichlorofluoromethane	ND		1.0		ug/L			03/13/24 12:13	1
Vinyl chloride	ND		1.0		ug/L			03/13/24 12:13	1
Xylenes, Total	ND		1.5		ug/L			03/13/24 12:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*03/13/24 12:13*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*03/13/24 12:13*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*03/13/24 12:13*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*03/13/24 12:13*	*1*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

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

Lab Sample ID: LCS 885-1708/2
Matrix: Air
Analysis Batch: 1708

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			20.1	17.7		ug/L		88			
Benzene			20.1	19.3		ug/L		96			
Chlorobenzene			20.1	20.1		ug/L		100			
Toluene			20.2	19.6		ug/L		97			
Trichloroethene (TCE)			20.2	18.7		ug/L		92			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*

QC Association Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

GC/MS VOA

Analysis Batch: 1708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-779-1	Influent 3-7-24	Total/NA	Air	8260B	
MB 885-1708/3	Method Blank	Total/NA	Air	8260B	
LCS 885-1708/2	Lab Control Sample	Total/NA	Air	8260B	

Analysis Batch: 1932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-779-1	Influent 3-7-24	Total/NA	Air	8015D	
MB 885-1932/3	Method Blank	Total/NA	Air	8015D	
LCS 885-1932/2	Lab Control Sample	Total/NA	Air	8015D	

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Client Sample ID: Influent 3-7-24

Date Collected: 03/07/24 14:45
Date Received: 03/08/24 07:00

Lab Sample ID: 885-779-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		50	1932	CM	EET ALB	03/13/24 13:51
Total/NA	Analysis	8260B		50	1708	CM	EET ALB	03/13/24 13:51

Laboratory References:

= , 1120 South 27th Street, Billings, MT 59107

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

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

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.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Laboratory: Eurofins Albuquerque (Continued)

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

Authority	Program	Identification Number	Expiration Date

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.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

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.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Laboratory: Eurofins Albuquerque (Continued)

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

Authority	Program	Identification Number	Expiration Date

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.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Method Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-779-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)	SW846	EET ALB
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET ALB
Subcontract	Fixed Gases	None	
5030C	Collection/Prep Tedlar Bag (P&T)	SW846	EET ALB

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

= , 1120 South 27th Street, Billings, MT 59107

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

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ANALYTICAL SUMMARY REPORT

March 21, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24030780 Quote ID: B15626
Project Name: Standard #1, 88500415

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 3/13/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24030780-001	Influent 3-7-24 (885-779-1)	03/07/24 14:45	03/13/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Standard #1, 88500415
Lab ID: B24030780-001
Client Sample ID: Influent 3-7-24 (885-779-1)

Report Date: 03/21/24
Collection Date: 03/07/24 14:45
DateReceived: 03/13/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.91	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Nitrogen	77.75	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Carbon Dioxide	0.30	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Hexanes plus	0.04	Mol %		0.01		GPA 2261-95	03/15/24 09:50 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
Hexanes plus	0.017	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
GPM Total	0.017	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
GPM Pentanes plus	0.017	gpm		0.001		GPA 2261-95	03/15/24 09:50 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-95	03/15/24 09:50 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-95	03/15/24 09:50 / jrj
Pseudo-critical Pressure, psia	547			1		GPA 2261-95	03/15/24 09:50 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	03/15/24 09:50 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	03/15/24 09:50 / jrj
Air, %	100.12			0.01		GPA 2261-95	03/15/24 09:50 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	03/15/24 09:50 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24030780 **Report Date:** 03/21/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R418183
Lab ID: **B24030780-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240315A				03/15/24 10:40
Oxygen		21.8	Mol %	0.01				0.3	20	
Nitrogen		77.8	Mol %	0.01				0.1	20	
Carbon Dioxide		0.30	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.04	Mol %	0.01				0.0	20	
Lab ID: **LCS031524**	11	Laboratory Control Sample				Run: GCNGA-B_240315A				03/18/24 02:59
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		5.90	Mol %	0.01	98	70	130			
Carbon Dioxide		1.01	Mol %	0.01	102	70	130			
Methane		75.2	Mol %	0.01	101	70	130			
Ethane		5.84	Mol %	0.01	97	70	130			
Propane		5.03	Mol %	0.01	102	70	130			
Isobutane		1.66	Mol %	0.01	83	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		0.99	Mol %	0.01	99	70	130			
n-Pentane		0.98	Mol %	0.01	98	70	130			
Hexanes plus		0.77	Mol %	0.01	96	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24030780

Login completed by: Danielle N. Harris
Date Received: 3/13/2024
Reviewed by: lleprowse
Received by: DNH
Reviewed Date: 3/18/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	12.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman, Andy	Carrier Tracking No(s):	COC No: 885-118.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy.freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Energy Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon; State - New Mexico		Job #: 885-779-1
Address: 1120 South 27th Street, ,	Due Date Requested: 3/15/2024			
City: Billings	TAT Requested (days):			
State, Zip: MT, 59107	PO #:			
Phone:	WO #:			
Email:	Project #: 88500415			
Project Name: Standard #1	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Fixed Gases) Fixed Gases	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Influent 3-7-24 (885-779-1)	3/7/24	14:45 Mountain		Air			X	1	B24030780

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 3-12-24 15:54	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/13/24 0910	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Ver: 06/08/2021

ICOC No:
885-118

Containers

Count	Container Type	Preservative
1	Tedlar Bag 1L	None

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Stuart Hyde

Sampler: Danny Burns

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp(including CF): 1.8-0.2=1.6 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
3-7-2024	14:45	Air	Influent 3-7-24	2-Tedlar	NA	885-779 COC

Analysis Request

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) Full List	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Fixed Gas O_2 CO_2
	X						X			X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3-7-2024	15:40		Chris Waller		3/7/24	1546
3/7/24	1719	Chris Waller		courier	3/8/24	7:00

Remarks: dburns@ensolum.com

cc: shyde

h mishriki

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.

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-779-1

Login Number: 779 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/10/2024 5:50:14 PM

JOB DESCRIPTION

Standard 1

JOB NUMBER

885-1704-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

my EOL

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

Generated
4/10/2024 5:50:14 PM

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

Client: Hilcorp Energy
Project/Site: Standard 1

Laboratory Job ID: 885-1704-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: Standard 1

Job ID: 885-1704-1

Job ID: 885-1704-1 Eurofins Albuquerque

Job Narrative
885-1704-1

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 sample was received on 3/23/2024 6:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 20.0°C.

Subcontract Work
Method Fixed Gases: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

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

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Client Sample ID: Influent 3-21

Lab Sample ID: 885-1704-1
Matrix: Air
Date Collected: 03/21/24 11:40
Date Received: 03/23/24 06:45
Sample Container: Tedlar Bag 1L

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**2900**		50		ug/L			03/28/24 12:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/28/24 12:59*	*10*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			03/28/24 12:59	10
1,1,1-Trichloroethane	ND		1.0		ug/L			03/28/24 12:59	10
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			03/28/24 12:59	10
1,1,2-Trichloroethane	ND		1.0		ug/L			03/28/24 12:59	10
1,1-Dichloroethane	ND		1.0		ug/L			03/28/24 12:59	10
1,1-Dichloroethene	ND		1.0		ug/L			03/28/24 12:59	10
1,1-Dichloropropene	ND		1.0		ug/L			03/28/24 12:59	10
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
1,2,3-Trichloropropane	ND		2.0		ug/L			03/28/24 12:59	10
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
1,2,4-Trimethylbenzene	**1.4**		1.0		ug/L			03/28/24 12:59	10
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			03/28/24 12:59	10
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			03/28/24 12:59	10
1,2-Dichlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
1,2-Dichloroethane (EDC)	ND		1.0		ug/L			03/28/24 12:59	10
1,2-Dichloropropane	ND		1.0		ug/L			03/28/24 12:59	10
1,3,5-Trimethylbenzene	**1.9**		1.0		ug/L			03/28/24 12:59	10
1,3-Dichlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
1,3-Dichloropropane	ND		1.0		ug/L			03/28/24 12:59	10
1,4-Dichlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
1-Methylnaphthalene	ND		4.0		ug/L			03/28/24 12:59	10
2,2-Dichloropropane	ND		2.0		ug/L			03/28/24 12:59	10
2-Butanone	ND		10		ug/L			03/28/24 12:59	10
2-Chlorotoluene	ND		1.0		ug/L			03/28/24 12:59	10
2-Hexanone	ND		10		ug/L			03/28/24 12:59	10
2-Methylnaphthalene	ND		4.0		ug/L			03/28/24 12:59	10
4-Chlorotoluene	ND		1.0		ug/L			03/28/24 12:59	10
4-Isopropyltoluene	ND		1.0		ug/L			03/28/24 12:59	10
4-Methyl-2-pentanone	ND		10		ug/L			03/28/24 12:59	10
Acetone	ND		10		ug/L			03/28/24 12:59	10
Benzene	**15**		1.0		ug/L			03/28/24 12:59	10
Bromobenzene	ND		1.0		ug/L			03/28/24 12:59	10
Bromodichloromethane	ND		1.0		ug/L			03/28/24 12:59	10
Dibromochloromethane	ND		1.0		ug/L			03/28/24 12:59	10
Bromoform	ND		1.0		ug/L			03/28/24 12:59	10
Bromomethane	ND		3.0		ug/L			03/28/24 12:59	10
Carbon disulfide	ND		10		ug/L			03/28/24 12:59	10
Carbon tetrachloride	ND		1.0		ug/L			03/28/24 12:59	10
Chlorobenzene	ND		1.0		ug/L			03/28/24 12:59	10
Chloroethane	ND		2.0		ug/L			03/28/24 12:59	10
Chloroform	ND		1.0		ug/L			03/28/24 12:59	10

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Client Sample ID: Influent 3-21

Date Collected: 03/21/24 11:40
Date Received: 03/23/24 06:45
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-1704-1

Matrix: Air

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		3.0		ug/L			03/28/24 12:59	10
cis-1,2-Dichloroethene	ND		1.0		ug/L			03/28/24 12:59	10
cis-1,3-Dichloropropene	ND		1.0		ug/L			03/28/24 12:59	10
Dibromomethane	ND		1.0		ug/L			03/28/24 12:59	10
Dichlorodifluoromethane	ND		1.0		ug/L			03/28/24 12:59	10
Ethylbenzene	**1.1**		1.0		ug/L			03/28/24 12:59	10
Hexachlorobutadiene	ND		1.0		ug/L			03/28/24 12:59	10
Isopropylbenzene	ND		1.0		ug/L			03/28/24 12:59	10
Methyl-tert-butyl Ether (MTBE)	ND		1.0		ug/L			03/28/24 12:59	10
Methylene Chloride	ND		3.0		ug/L			03/28/24 12:59	10
n-Butylbenzene	ND		3.0		ug/L			03/28/24 12:59	10
N-Propylbenzene	ND		1.0		ug/L			03/28/24 12:59	10
Naphthalene	ND		2.0		ug/L			03/28/24 12:59	10
sec-Butylbenzene	ND		1.0		ug/L			03/28/24 12:59	10
Styrene	ND		1.0		ug/L			03/28/24 12:59	10
tert-Butylbenzene	ND		1.0		ug/L			03/28/24 12:59	10
Tetrachloroethene (PCE)	ND		1.0		ug/L			03/28/24 12:59	10
Toluene	**27**		1.0		ug/L			03/28/24 12:59	10
trans-1,2-Dichloroethene	ND		1.0		ug/L			03/28/24 12:59	10
trans-1,3-Dichloropropene	ND		1.0		ug/L			03/28/24 12:59	10
Trichloroethene (TCE)	ND		1.0		ug/L			03/28/24 12:59	10
Trichlorofluoromethane	ND		1.0		ug/L			03/28/24 12:59	10
Vinyl chloride	ND		1.0		ug/L			03/28/24 12:59	10
Xylenes, Total	**34**		1.5		ug/L			03/28/24 12:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*03/28/24 12:59*	*10*
Toluene-d8 (Surr)	*117*		*70 - 130*		*03/28/24 12:59*	*10*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*03/28/24 12:59*	*10*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/28/24 12:59*	*10*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Method: 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-2497/3
Matrix: Air
Analysis Batch: 2497

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		50		ug/L			03/28/24 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*62 - 130*		*03/28/24 11:45*	*1*

Lab Sample ID: LCS 885-2497/2
Matrix: Air
Analysis Batch: 2497

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			500	510		ug/L		102			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 885-1704-1 DU
Matrix: Air
Analysis Batch: 2497

Client Sample ID: Influent 3-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	2900			2830		ug/L				3	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 885-2498/3
Matrix: Air
Analysis Batch: 2498

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10		ug/L			03/28/24 11:45	1
1,1,1-Trichloroethane	ND		0.10		ug/L			03/28/24 11:45	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			03/28/24 11:45	1
1,1,2-Trichloroethane	ND		0.10		ug/L			03/28/24 11:45	1
1,1-Dichloroethane	ND		0.10		ug/L			03/28/24 11:45	1
1,1-Dichloroethene	ND		0.10		ug/L			03/28/24 11:45	1
1,1-Dichloropropene	ND		0.10		ug/L			03/28/24 11:45	1
1,2,3-Trichlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1
1,2,3-Trichloropropane	ND		0.20		ug/L			03/28/24 11:45	1
1,2,4-Trichlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1
1,2,4-Trimethylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
1,2-Dibromo-3-Chloropropane	ND		0.20		ug/L			03/28/24 11:45	1
1,2-Dibromoethane (EDB)	ND		0.10		ug/L			03/28/24 11:45	1
1,2-Dichlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

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

Lab Sample ID: MB 885-2498/3
Matrix: Air
Analysis Batch: 2498

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane (EDC)	ND		0.10		ug/L			03/28/24 11:45	1
1,2-Dichloropropane	ND		0.10		ug/L			03/28/24 11:45	1
1,3,5-Trimethylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
1,3-Dichlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1
1,3-Dichloropropane	ND		0.10		ug/L			03/28/24 11:45	1
1,4-Dichlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1
1-Methylnaphthalene	ND		0.40		ug/L			03/28/24 11:45	1
2,2-Dichloropropane	ND		0.20		ug/L			03/28/24 11:45	1
2-Butanone	ND		1.0		ug/L			03/28/24 11:45	1
2-Chlorotoluene	ND		0.10		ug/L			03/28/24 11:45	1
2-Hexanone	ND		1.0		ug/L			03/28/24 11:45	1
2-Methylnaphthalene	ND		0.40		ug/L			03/28/24 11:45	1
4-Chlorotoluene	ND		0.10		ug/L			03/28/24 11:45	1
4-Isopropyltoluene	ND		0.10		ug/L			03/28/24 11:45	1
4-Methyl-2-pentanone	ND		1.0		ug/L			03/28/24 11:45	1
Acetone	ND		1.0		ug/L			03/28/24 11:45	1
Benzene	ND		0.10		ug/L			03/28/24 11:45	1
Bromobenzene	ND		0.10		ug/L			03/28/24 11:45	1
Bromodichloromethane	ND		0.10		ug/L			03/28/24 11:45	1
Dibromochloromethane	ND		0.10		ug/L			03/28/24 11:45	1
Bromoform	ND		0.10		ug/L			03/28/24 11:45	1
Bromomethane	ND		0.30		ug/L			03/28/24 11:45	1
Carbon disulfide	ND		1.0		ug/L			03/28/24 11:45	1
Carbon tetrachloride	ND		0.10		ug/L			03/28/24 11:45	1
Chlorobenzene	ND		0.10		ug/L			03/28/24 11:45	1
Chloroethane	ND		0.20		ug/L			03/28/24 11:45	1
Chloroform	ND		0.10		ug/L			03/28/24 11:45	1
Chloromethane	ND		0.30		ug/L			03/28/24 11:45	1
cis-1,2-Dichloroethene	ND		0.10		ug/L			03/28/24 11:45	1
cis-1,3-Dichloropropene	ND		0.10		ug/L			03/28/24 11:45	1
Dibromomethane	ND		0.10		ug/L			03/28/24 11:45	1
Dichlorodifluoromethane	ND		0.10		ug/L			03/28/24 11:45	1
Ethylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
Hexachlorobutadiene	ND		0.10		ug/L			03/28/24 11:45	1
Isopropylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
Methyl-tert-butyl Ether (MTBE)	ND		0.10		ug/L			03/28/24 11:45	1
Methylene Chloride	ND		0.30		ug/L			03/28/24 11:45	1
n-Butylbenzene	ND		0.30		ug/L			03/28/24 11:45	1
N-Propylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
Naphthalene	ND		0.20		ug/L			03/28/24 11:45	1
sec-Butylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
Styrene	ND		0.10		ug/L			03/28/24 11:45	1
tert-Butylbenzene	ND		0.10		ug/L			03/28/24 11:45	1
Tetrachloroethene (PCE)	ND		0.10		ug/L			03/28/24 11:45	1
Toluene	ND		0.10		ug/L			03/28/24 11:45	1
trans-1,2-Dichloroethene	ND		0.10		ug/L			03/28/24 11:45	1
trans-1,3-Dichloropropene	ND		0.10		ug/L			03/28/24 11:45	1
Trichloroethene (TCE)	ND		0.10		ug/L			03/28/24 11:45	1
Trichlorofluoromethane	ND		0.10		ug/L			03/28/24 11:45	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

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

Lab Sample ID: MB 885-2498/3
Matrix: Air
Analysis Batch: 2498

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.10		ug/L			03/28/24 11:45	1
Xylenes, Total	ND		0.15		ug/L			03/28/24 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*03/28/24 11:45*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/28/24 11:45*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/28/24 11:45*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/28/24 11:45*	*1*

Lab Sample ID: LCS 885-2498/2
Matrix: Air
Analysis Batch: 2498

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			20.1	19.8		ug/L		98			
Benzene			20.1	20.2		ug/L		101			
Chlorobenzene			20.1	20.4		ug/L		102			
Toluene			20.2	20.2		ug/L		100			
Trichloroethene (TCE)			20.2	19.6		ug/L		97			

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*

Lab Sample ID: 885-1704-1 DU
Matrix: Air
Analysis Batch: 2498

Client Sample ID: Influent 3-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND			ND		ug/L				NC	20
1,1,1-Trichloroethane	ND			ND		ug/L				NC	20
1,1,2,2-Tetrachloroethane	ND			ND		ug/L				NC	20
1,1,2-Trichloroethane	ND			ND		ug/L				NC	20
1,1-Dichloroethane	ND			ND		ug/L				NC	20
1,1-Dichloroethene	ND			ND		ug/L				NC	20
1,1-Dichloropropene	ND			ND		ug/L				NC	20
1,2,3-Trichlorobenzene	ND			ND		ug/L				NC	20
1,2,3-Trichloropropane	ND			ND		ug/L				NC	20
1,2,4-Trichlorobenzene	ND			ND		ug/L				NC	20
1,2,4-Trimethylbenzene	1.4			1.35		ug/L				4	20
1,2-Dibromo-3-Chloropropane	ND			ND		ug/L				NC	20
1,2-Dibromoethane (EDB)	ND			ND		ug/L				NC	20
1,2-Dichlorobenzene	ND			ND		ug/L				NC	20
1,2-Dichloroethane (EDC)	ND			ND		ug/L				NC	20
1,2-Dichloropropane	ND			ND		ug/L				NC	20
1,3,5-Trimethylbenzene	1.9			1.86		ug/L				3	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

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

Lab Sample ID: 885-1704-1 DU
Matrix: Air
Analysis Batch: 2498

Client Sample ID: Influent 3-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,3-Dichlorobenzene	ND			ND		ug/L				NC	20
1,3-Dichloropropane	ND			ND		ug/L				NC	20
1,4-Dichlorobenzene	ND			ND		ug/L				NC	20
1-Methylnaphthalene	ND			ND		ug/L				NC	20
2,2-Dichloropropane	ND			ND		ug/L				NC	20
2-Butanone	ND			ND		ug/L				NC	20
2-Chlorotoluene	ND			ND		ug/L				NC	20
2-Hexanone	ND			ND		ug/L				NC	20
2-Methylnaphthalene	ND			ND		ug/L				NC	20
4-Chlorotoluene	ND			ND		ug/L				NC	20
4-Isopropyltoluene	ND			ND		ug/L				NC	20
4-Methyl-2-pentanone	ND			ND		ug/L				NC	20
Acetone	ND			ND		ug/L				NC	20
Benzene	15			15.9		ug/L				6	20
Bromobenzene	ND			ND		ug/L				NC	20
Bromodichloromethane	ND			ND		ug/L				NC	20
Dibromochloromethane	ND			ND		ug/L				NC	20
Bromoform	ND			ND		ug/L				NC	20
Bromomethane	ND			ND		ug/L				NC	20
Carbon disulfide	ND			ND		ug/L				NC	20
Carbon tetrachloride	ND			ND		ug/L				NC	20
Chlorobenzene	ND			ND		ug/L				NC	20
Chloroethane	ND			ND		ug/L				NC	20
Chloroform	ND			ND		ug/L				NC	20
Chloromethane	ND			ND		ug/L				NC	20
cis-1,2-Dichloroethene	ND			ND		ug/L				NC	20
cis-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Dibromomethane	ND			ND		ug/L				NC	20
Dichlorodifluoromethane	ND			ND		ug/L				NC	20
Ethylbenzene	1.1			1.10		ug/L				0.9	20
Hexachlorobutadiene	ND			ND		ug/L				NC	20
Isopropylbenzene	ND			ND		ug/L				NC	20
Methyl-tert-butyl Ether (MTBE)	ND			ND		ug/L				NC	20
Methylene Chloride	ND			ND		ug/L				NC	20
n-Butylbenzene	ND			ND		ug/L				NC	20
N-Propylbenzene	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
sec-Butylbenzene	ND			ND		ug/L				NC	20
Styrene	ND			ND		ug/L				NC	20
tert-Butylbenzene	ND			ND		ug/L				NC	20
Tetrachloroethene (PCE)	ND			ND		ug/L				NC	20
Toluene	27			28.4		ug/L				4	20
trans-1,2-Dichloroethene	ND			ND		ug/L				NC	20
trans-1,3-Dichloropropene	ND			ND		ug/L				NC	20
Trichloroethene (TCE)	ND			ND		ug/L				NC	20
Trichlorofluoromethane	ND			ND		ug/L				NC	20
Vinyl chloride	ND			ND		ug/L				NC	20
Xylenes, Total	34			33.8		ug/L				0.8	20

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

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

Lab Sample ID: 885-1704-1 DU
Matrix: Air
Analysis Batch: 2498

Client Sample ID: Influent 3-21
Prep Type: Total/NA

Surrogate	DU %Recovery	DU Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
Toluene-d8 (Surr)	118		70 - 130
4-Bromofluorobenzene (Surr)	105		70 - 130
Dibromofluoromethane (Surr)	95		70 - 130

QC Association Summary

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

GC/MS VOA

Analysis Batch: 2497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1704-1	Influent 3-21	Total/NA	Air	8015D	
MB 885-2497/3	Method Blank	Total/NA	Air	8015D	
LCS 885-2497/2	Lab Control Sample	Total/NA	Air	8015D	
885-1704-1 DU	Influent 3-21	Total/NA	Air	8015D	

Analysis Batch: 2498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1704-1	Influent 3-21	Total/NA	Air	8260B	
MB 885-2498/3	Method Blank	Total/NA	Air	8260B	
LCS 885-2498/2	Lab Control Sample	Total/NA	Air	8260B	
885-1704-1 DU	Influent 3-21	Total/NA	Air	8260B	

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Client Sample ID: Influent 3-21

Date Collected: 03/21/24 11:40
Date Received: 03/23/24 06:45

Lab Sample ID: 885-1704-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		10	2497	CM	EET ALB	03/28/24 12:59
Total/NA	Analysis	8260B		10	2498	CM	EET ALB	03/28/24 12:59

Laboratory References:

= , 1120 South 27th Street, Billings, MT 59107

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

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

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.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Laboratory: Eurofins Albuquerque (Continued)

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

Authority	Program	Identification Number	Expiration Date

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.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

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.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard 1

Job ID: 885-1704-1

Laboratory: Eurofins Albuquerque (Continued)

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

Authority	Program	Identification Number	Expiration Date

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.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

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ANALYTICAL SUMMARY REPORT

April 09, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24031582 Quote ID: B15626
Project Name: Standard 1, 88500531

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 3/26/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24031582-001	Influent 3-21 (885-1704-1)	03/21/24 11:40	03/26/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Standard 1, 88500531
Lab ID: B24031582-001
Client Sample ID: Influent 3-21 (885-1704-1)

Report Date: 04/09/24
Collection Date: 03/21/24 11:40
DateReceived: 03/26/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.57	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Nitrogen	78.10	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Carbon Dioxide	0.29	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Hexanes plus	0.04	Mol %		0.01		GPA 2261-95	03/28/24 10:13 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
Hexanes plus	0.017	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
GPM Total	0.017	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
GPM Pentanes plus	0.017	gpm		0.001		GPA 2261-95	03/28/24 10:13 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-95	03/28/24 10:13 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-95	03/28/24 10:13 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	03/28/24 10:13 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	03/28/24 10:13 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	03/28/24 10:13 / jrj
Air, %	98.56			0.01		GPA 2261-95	03/28/24 10:13 / jrj
- The analysis was corrected for air contamination.							
COMMENTS							
-						-	03/28/24 10:13 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24031582 **Report Date:** 04/09/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R418861
Lab ID: **B24031582-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240328A				03/28/24 11:03
Oxygen		21.7	Mol %	0.01				0.4	20	
Nitrogen		78.0	Mol %	0.01				0.1	20	
Carbon Dioxide		0.29	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.04	Mol %	0.01				0.0	20	
Lab ID: **LCS032824**	11	Laboratory Control Sample				Run: GCNGA-B_240328A				03/28/24 01:28
Oxygen		0.65	Mol %	0.01	130	70	130			
Nitrogen		6.09	Mol %	0.01	101	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		74.5	Mol %	0.01	100	70	130			
Ethane		6.05	Mol %	0.01	101	70	130			
Propane		5.00	Mol %	0.01	101	70	130			
Isobutane		1.93	Mol %	0.01	96	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		1.01	Mol %	0.01	101	70	130			
n-Pentane		1.00	Mol %	0.01	100	70	130			
Hexanes plus		0.79	Mol %	0.01	99	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Work Order Receipt Checklist

Hall Environmental

B24031582

Login completed by: Crystal M. Jones
Date Received: 3/26/2024

Reviewed by: agilbert
Received by: AAG

Reviewed Date: 3/27/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	12.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman, Andy	Carrier Tracking No(s):	COC No: 885-197.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy.freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Energy Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon; State - New Mexico		Job #: 885-1704-1
Address: 1120 South 27th Street, ,	Due Date Requested: 4/1/2024			
City: Billings	TAT Requested (days):			
State, Zip: MT, 59107				
Phone:	PO #:			
Email:	WO #:			
Project Name: Standard 1	Project #: 88500531			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Fixed Gases)/ Fixed Gases	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Influent 3-21 (885-1704-1)	3/21/24	11:40 Mountain		Air			X	1	B24031582

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		3/25/24 12:42				
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

ICOC No:
885-197

Containers

Count	Container Type	Preservative
1	Tedlar Bag 1L	None

Chain-of-Custody Record

Client: Hilcorp

Mitch Killough

Mailing Address:

Phone #:

email or Fax#: MKillough@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) .xcl

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp (Including CF): N/A (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 871

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

885-1704 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)	O_2 & CO_2					
3-21	11:40	Air	Influent 3-21	2 Tedlar				X						X			X					

Date.	Time.	Relinquished by:	Received by	Via.	Date	Time
3-22	1416				3/22/24	1416
3/22/24	1800	Chant Walker		Courier	3/23/24	6:45

Remarks:

cc: ecarroll@ensolum.com
Shyde@ensolum.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.

4/10/2024

Chain-of-Custody Record

Client: Hilcorp

Mitch Killough

Mailing Address:

Phone #:

email or Fax#: MKillough@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) Excel

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp (including CF): N/A (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 871

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

885-1704 COC

4/10/2024

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)	O_2 & CO_2					
3-21	11'40	Air	Influent 3-21	2 Tedlar				X						X			X					

Date	Time.	Relinquished by.	Received by.	Via.	Date	Time
3-22	1416				3/22/24	1416
Date: 3/22/24	Time: 1800	Relinquished by.	Received by:	Via: Courier	Date 3/23/24	Time 6:45

Remarks:

cc: ecarroll@ensolum.com
Shyde@ensolum.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

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-1704-1

Login Number: 1704 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

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.	False	Thermal preservation not required.
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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

February 13, 2024

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

RE: Standard 1 OrderNo.: 2401A25

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 1/25/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401A25**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-24-24
Project: Standard 1
Collection Date: 1/24/2024 1:40:00 PM
Lab ID: 2401A25-001 **Matrix:** AIR
Received Date: 1/25/2024 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	4400	250		µg/L	50	2/2/2024 3:36:35 PM
Surr: BFB	130	15-412		%Rec	50	2/2/2024 3:36:35 PM
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	22	5.0		µg/L	50	2/7/2024 4:54:00 PM
Toluene	40	5.0		µg/L	50	2/7/2024 4:54:00 PM
Ethylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Naphthalene	ND	10		µg/L	50	2/7/2024 4:54:00 PM
1-Methylnaphthalene	ND	20		µg/L	50	2/7/2024 4:54:00 PM
2-Methylnaphthalene	ND	20		µg/L	50	2/7/2024 4:54:00 PM
Acetone	ND	50		µg/L	50	2/7/2024 4:54:00 PM
Bromobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Bromodichloromethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Bromoform	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Bromomethane	ND	10		µg/L	50	2/7/2024 4:54:00 PM
2-Butanone	ND	50		µg/L	50	2/7/2024 4:54:00 PM
Carbon disulfide	ND	50		µg/L	50	2/7/2024 4:54:00 PM
Carbon tetrachloride	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Chlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Chloroethane	ND	10		µg/L	50	2/7/2024 4:54:00 PM
Chloroform	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Chloromethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
2-Chlorotoluene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
4-Chlorotoluene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
cis-1,2-DCE	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	2/7/2024 4:54:00 PM
Dibromochloromethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Dibromomethane	ND	10		µg/L	50	2/7/2024 4:54:00 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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

Analytical Report
Lab Order **2401A25**
Date Reported: **2/13/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-24-24
Project: Standard 1
Collection Date: 1/24/2024 1:40:00 PM
Lab ID: 2401A25-001 **Matrix:** AIR
Received Date: 1/25/2024 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,2-Dichloropropane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,3-Dichloropropane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
2,2-Dichloropropane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1-Dichloropropene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Hexachlorobutadiene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
2-Hexanone	ND	50		µg/L	50	2/7/2024 4:54:00 PM
Isopropylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
4-Isopropyltoluene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
4-Methyl-2-pentanone	ND	50		µg/L	50	2/7/2024 4:54:00 PM
Methylene chloride	ND	15		µg/L	50	2/7/2024 4:54:00 PM
n-Butylbenzene	ND	15		µg/L	50	2/7/2024 4:54:00 PM
n-Propylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
sec-Butylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Styrene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
tert-Butylbenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
trans-1,2-DCE	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Trichloroethene (TCE)	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Trichlorofluoromethane	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
1,2,3-Trichloropropane	ND	10		µg/L	50	2/7/2024 4:54:00 PM
Vinyl chloride	ND	5.0		µg/L	50	2/7/2024 4:54:00 PM
Xylenes, Total	30	7.5		µg/L	50	2/7/2024 4:54:00 PM
Surr: Dibromofluoromethane	95.4	70-130		%Rec	50	2/7/2024 4:54:00 PM
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%Rec	50	2/7/2024 4:54:00 PM
Surr: Toluene-d8	108	70-130		%Rec	50	2/7/2024 4:54:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	50	2/7/2024 4:54:00 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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ANALYTICAL SUMMARY REPORT

February 01, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24011306 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 1/26/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24011306-001	2401A25-001B, Influent 1-24-24	01/24/24 13:40	01/26/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B24011306-001
Client Sample ID: 2401A25-001B, Influent 1-24-24

Report Date: 02/01/24
Collection Date: 01/24/24 13:40
DateReceived: 01/26/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.19	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Nitrogen	78.18	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Carbon Dioxide	0.57	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Hexanes plus	0.06	Mol %		0.01		GPA 2261-95	01/29/24 11:32 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
Hexanes plus	0.025	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
GPM Total	0.025	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
GPM Pentanes plus	0.025	gpm		0.001		GPA 2261-95	01/29/24 11:32 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	3			1		GPA 2261-95	01/29/24 11:32 / jrj
Net BTU per cu ft @ std cond. (LHV)	3			1		GPA 2261-95	01/29/24 11:32 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	01/29/24 11:32 / jrj
Pseudo-critical Temperature, deg R	241			1		GPA 2261-95	01/29/24 11:32 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	01/29/24 11:32 / jrj
Air, %	96.81			0.01		GPA 2261-95	01/29/24 11:32 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	01/29/24 11:32 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24011306 **Report Date:** 02/01/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R415794
Lab ID: **B24011306-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240129A				01/29/24 12:22
Oxygen		21.2	Mol %	0.01				0	20	
Nitrogen		78.2	Mol %	0.01				0	20	
Carbon Dioxide		0.57	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.05	Mol %	0.01				18	20	
Lab ID: **LCS012924**	11	Laboratory Control Sample				Run: GCNGA-B_240129A				01/29/24 01:18
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		6.22	Mol %	0.01	104	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		75.1	Mol %	0.01	101	70	130			
Ethane		5.87	Mol %	0.01	98	70	130			
Propane		4.79	Mol %	0.01	97	70	130			
Isobutane		1.69	Mol %	0.01	84	70	130			
n-Butane		2.01	Mol %	0.01	100	70	130			
Isopentane		0.98	Mol %	0.01	98	70	130			
n-Pentane		0.91	Mol %	0.01	91	70	130			
Hexanes plus		0.78	Mol %	0.01	98	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24011306

Login completed by: Crystal M. Jones
Date Received: 1/26/2024
Reviewed by: dharris
Received by: LEL
Reviewed Date: 1/26/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	7.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR: Energy Labs -Billings	COMPANY: Energy Laboratories	PHONE: (406) 869-6253	FAX: (406) 252-6069
ADDRESS: 1120 South 27th Street		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: Billings, MT 59107			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2401A25-001B	Influent 1-24-24	TEDLAR	Air	1/24/2024 1:40:00 PM	1	Natural Gas Analysis.

B24011306

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 1/25/2024	Time: 9:38 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Lydia Lehane	Date: 1/26/24	Time: 09:15

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ____ °C Attempt to Cool ? ____
Comments: ____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401A25**

13-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401A25-001adup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Influent 1-24-24** Batch ID: **R102941** RunNo: **102941**

Prep Date: Analysis Date: **2/7/2024** SeqNo: **3804542** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	5.0						0.320	20	
Toluene	40	5.0						0.152	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	5.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2401A25**

13-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401A25-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 1-24-24**	Batch ID: **R102941**	RunNo: **102941**
Prep Date:	Analysis Date: **2/7/2024**	SeqNo: **3804542** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	29	7.5						4.95	20	
Surr: Dibromofluoromethane	46		50.00		92.9	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	46		50.00		92.5	70	130	0	0	
Surr: Toluene-d8	55		50.00		110	70	130	0	0	
Surr: 4-Bromofluorobenzene	52		50.00		104	70	130	0	0	

Qualifiers:

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

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Eurofins Environment Testing South Central, LLC
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: **2401A25** RcptNo: **1**

Received By: **Cheyenne Cason** **1/25/2024 7:45:00 AM**

Completed By: **Tracy Casarrubias** **1/25/2024 9:21:06 AM**

Reviewed By: TMC 1/25/24

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: TMC 1/25/24

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: Mailing address, phone number, and Email/Fax are missing on COC - TMC 1/25/24

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp
Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Stuart Hyde

Sampler: Danny Burns

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp(Including CF): NA (°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. 2401A25	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) Full list	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Fixed Gas
1-24-2024	13:40	Air	Influent 1-24-24	2 Tedlar	N1	001		X						X			X

Relinquished by:	Received by:	Via:	Date	Time
Date: 1-24-2024 Time: 15:15				
Date: 1/24/24 Time: 1728			1/25/24	0745

Remarks: dburns
cc: dhenrpmann@ensolum.com
shyde

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.

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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 04, 2024

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

RE: Standard 1 OrderNo.: 2402A63

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 2/22/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2402A63**
Date Reported: **3/4/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent
Project: Standard 1
Collection Date: 2/21/2024 12:05:00 PM
Lab ID: 2402A63-001 **Matrix:** AIR
Received Date: 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	2900	250		µg/L	50	2/23/2024 12:46:22 PM
Surr: BFB	108	15-412		%Rec	50	2/23/2024 12:46:22 PM
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	13	2.0		µg/L	20	2/29/2024 12:58:00 PM
Toluene	18	2.0		µg/L	20	2/29/2024 12:58:00 PM
Ethylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Naphthalene	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
1-Methylnaphthalene	ND	8.0		µg/L	20	2/29/2024 12:58:00 PM
2-Methylnaphthalene	ND	8.0		µg/L	20	2/29/2024 12:58:00 PM
Acetone	ND	20		µg/L	20	2/29/2024 12:58:00 PM
Bromobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Bromodichloromethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Bromoform	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Bromomethane	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
2-Butanone	ND	20		µg/L	20	2/29/2024 12:58:00 PM
Carbon disulfide	ND	20		µg/L	20	2/29/2024 12:58:00 PM
Carbon tetrachloride	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Chlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Chloroethane	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
Chloroform	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Chloromethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
2-Chlorotoluene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
4-Chlorotoluene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
cis-1,2-DCE	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
cis-1,3-Dichloropropene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
Dibromochloromethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Dibromomethane	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Dichlorodifluoromethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1-Dichloroethene	ND	2.0		µg/L	20	2/29/2024 12:58:00 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2402A63**
Date Reported: **3/4/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent
Project: Standard 1
Collection Date: 2/21/2024 12:05:00 PM
Lab ID: 2402A63-001 **Matrix:** AIR
Received Date: 2/22/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,2-Dichloropropane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
2-Hexanone	ND	20		µg/L	20	2/29/2024 12:58:00 PM
Isopropylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
4-Methyl-2-pentanone	ND	20		µg/L	20	2/29/2024 12:58:00 PM
Methylene chloride	ND	6.0		µg/L	20	2/29/2024 12:58:00 PM
n-Butylbenzene	ND	6.0		µg/L	20	2/29/2024 12:58:00 PM
n-Propylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
sec-Butylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Styrene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
tert-Butylbenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Tetrachloroethene (PCE)	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
trans-1,2-DCE	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
trans-1,3-Dichloropropene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Trichloroethene (TCE)	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
1,2,3-Trichloropropane	ND	4.0		µg/L	20	2/29/2024 12:58:00 PM
Vinyl chloride	ND	2.0		µg/L	20	2/29/2024 12:58:00 PM
Xylenes, Total	18	3.0		µg/L	20	2/29/2024 12:58:00 PM
Surr: Dibromofluoromethane	96.7	70-130		%Rec	20	2/29/2024 12:58:00 PM
Surr: 1,2-Dichloroethane-d4	87.2	70-130		%Rec	20	2/29/2024 12:58:00 PM
Surr: Toluene-d8	111	70-130		%Rec	20	2/29/2024 12:58:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	20	2/29/2024 12:58:00 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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ANALYTICAL SUMMARY REPORT

March 01, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24021412 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 2/23/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24021412-001	2402A63-001B, Influent	02/21/24 12:05	02/23/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

Organic Supervisor

Digitally signed by Ladonna Weis
Date: 2024.03.01 14:05:34 -07:00

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B24021412-001
Client Sample ID: 2402A63-001B, Influent

Report Date: 03/01/24
Collection Date: 02/21/24 12:05
DateReceived: 02/23/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	19.74	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Nitrogen	79.83	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Carbon Dioxide	0.40	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	02/26/24 10:04 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	02/26/24 10:04 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	02/26/24 10:04 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	02/26/24 10:04 / jrj
Pseudo-critical Pressure, psia	542			1		GPA 2261-95	02/26/24 10:04 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	02/26/24 10:04 / jrj
Specific Gravity @ 60/60F	0.998			0.001		D3588-81	02/26/24 10:04 / jrj
Air, %	90.19			0.01		GPA 2261-95	02/26/24 10:04 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	02/26/24 10:04 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24021412 **Report Date:** 03/01/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95										Batch: R417194
Lab ID: B24021103-001ADUP	12	Sample Duplicate				Run: GCNGA-B_240226A			02/26/24 01:17	
Oxygen		0.84	Mol %	0.01				1.2	20	
Nitrogen		83.3	Mol %	0.01				0.2	20	
Carbon Dioxide		11.0	Mol %	0.01				0.9	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		0.02	Mol %	0.01				0.0	20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.04	Mol %	0.01				0.0	20	
Lab ID: LCS022624	11	Laboratory Control Sample				Run: GCNGA-B_240226A			02/26/24 02:11	
Oxygen		0.61	Mol %	0.01	122	70	130			
Nitrogen		6.37	Mol %	0.01	106	70	130			
Carbon Dioxide		1.02	Mol %	0.01	103	70	130			
Methane		74.3	Mol %	0.01	99	70	130			
Ethane		5.99	Mol %	0.01	100	70	130			
Propane		5.02	Mol %	0.01	102	70	130			
Isobutane		1.82	Mol %	0.01	91	70	130			
n-Butane		1.99	Mol %	0.01	99	70	130			
Isopentane		1.02	Mol %	0.01	102	70	130			
n-Pentane		1.03	Mol %	0.01	103	70	130			
Hexanes plus		0.81	Mol %	0.01	101	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24021412

Login completed by:	Danielle N. Harris	Date Received:	2/23/2024
Reviewed by:	gmccartney	Received by:	DNH
Reviewed Date:	2/28/2024	Carrier name:	FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	15.0°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

eurofins | Environment Testing

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

B24021412

SUB CONTRATOR: **Energy Labs -Billings**	COMPANY: **Energy Laboratories**	PHONE: **(406) 869-6253**	FAX: **(406) 252-6069**
ADDRESS: **1120 South 27th Street**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Billings, MT 59107**			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2402A63-001B	Influent	TEDLAR	Air	2/21/2024 12:05:00 PM	1	Natural Gas Analysis.

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date: 2/22/2024	Time: 9:27 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: [signature]	Date: 2/23/24	Time: 0915

TAT: Standard ☐ (circled) RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples ______ °C Attempt to Cool ? ______

Comments: ______

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
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: 2402A63 RcptNo: 1

Received By: Tracy Casarrubias 2/22/2024 7:00:00 AM

Completed By: Tracy Casarrubias 2/22/2024 9:22:57 AM

Reviewed By: 2/22/24

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: M 2/22/24

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: Mailing address and phone number are missing on COC- TMC 2/22/24

16. Additional remarks:

17. Cooler Information

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

Chain-of-Custody Record

Client: HEC

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mitch Killough

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Stuart Hyde

Sampler: Peter Anderson

On Ice: ☐ Yes ☑ No

# of Coolers: 1

Cooler Temp(including CF): N/A (°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. 2402A63	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) full list	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Fixed Gas
2/21/24	1205	Air	Influent	2 Tedlar	NA	001		X						X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/21/24	1405	PA	CWalt		2/21/24	1405
2/21/24	1740	Christa Walker		courier	2/22/24	7:00

Remarks: CC dburns
dHenchmann@Ensolum.com
sHyde

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.

eurofins | Environment Testing

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

January 24, 2024

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

RE: Standard 1A OrderNo.: 2401263

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 2 sample(s) on 1/6/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401263**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-4-24
Project: Standard 1A
Collection Date: 1/4/2024 2:30:00 PM
Lab ID: 2401263-001 **Matrix:** AIR
Received Date: 1/6/2024 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	3400	250		µg/L	50	1/8/2024 5:19:46 PM
Surr: BFB	108	15-412		%Rec	50	1/8/2024 5:19:46 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	29	5.0		µg/L	50	1/16/2024 12:47:39 PM
Toluene	40	5.0		µg/L	50	1/16/2024 12:47:39 PM
Ethylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Naphthalene	ND	10		µg/L	50	1/16/2024 12:47:39 PM
1-Methylnaphthalene	ND	20		µg/L	50	1/16/2024 12:47:39 PM
2-Methylnaphthalene	ND	20		µg/L	50	1/16/2024 12:47:39 PM
Acetone	ND	50		µg/L	50	1/16/2024 12:47:39 PM
Bromobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Bromodichloromethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Bromoform	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Bromomethane	ND	10		µg/L	50	1/16/2024 12:47:39 PM
2-Butanone	ND	50		µg/L	50	1/16/2024 12:47:39 PM
Carbon disulfide	ND	50		µg/L	50	1/16/2024 12:47:39 PM
Carbon tetrachloride	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Chlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Chloroethane	ND	10		µg/L	50	1/16/2024 12:47:39 PM
Chloroform	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Chloromethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
2-Chlorotoluene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
4-Chlorotoluene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
cis-1,2-DCE	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	1/16/2024 12:47:39 PM
Dibromochloromethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Dibromomethane	ND	10		µg/L	50	1/16/2024 12:47:39 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Dichlorodifluoromethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1-Dichloroethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1-Dichloroethene	ND	5.0		µg/L	50	1/16/2024 12:47:39 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.

Analytical Report
Lab Order **2401263**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-4-24
Project: Standard 1A
Collection Date: 1/4/2024 2:30:00 PM
Lab ID: 2401263-001 **Matrix:** AIR **Received Date:** 1/6/2024 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,2-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,3-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
2,2-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Hexachlorobutadiene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
2-Hexanone	ND	50		µg/L	50	1/16/2024 12:47:39 PM
Isopropylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
4-Isopropyltoluene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
4-Methyl-2-pentanone	ND	50		µg/L	50	1/16/2024 12:47:39 PM
Methylene chloride	ND	15		µg/L	50	1/16/2024 12:47:39 PM
n-Butylbenzene	ND	15		µg/L	50	1/16/2024 12:47:39 PM
n-Propylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
sec-Butylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Styrene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
tert-Butylbenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
trans-1,2-DCE	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Trichloroethene (TCE)	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Trichlorofluoromethane	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
1,2,3-Trichloropropane	ND	10		µg/L	50	1/16/2024 12:47:39 PM
Vinyl chloride	ND	5.0		µg/L	50	1/16/2024 12:47:39 PM
Xylenes, Total	18	7.5		µg/L	50	1/16/2024 12:47:39 PM
Surr: Dibromofluoromethane	75.3	70-130		%Rec	50	1/16/2024 12:47:39 PM
Surr: 1,2-Dichloroethane-d4	84.7	70-130		%Rec	50	1/16/2024 12:47:39 PM
Surr: Toluene-d8	105	70-130		%Rec	50	1/16/2024 12:47:39 PM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	50	1/16/2024 12:47:39 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.		

Analytical Report
Lab Order **2401263**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-5-24
Project: Standard 1A
Collection Date: 1/5/2024 2:00:00 PM
Lab ID: 2401263-002 **Matrix:** AIR **Received Date:** 1/6/2024 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	2300	250		µg/L	50	1/8/2024 6:07:26 PM
Surr: BFB	99.4	15-412		%Rec	50	1/8/2024 6:07:26 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	18	5.0		µg/L	50	1/16/2024 1:15:08 PM
Toluene	26	5.0		µg/L	50	1/16/2024 1:15:08 PM
Ethylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Naphthalene	ND	10		µg/L	50	1/16/2024 1:15:08 PM
1-Methylnaphthalene	ND	20		µg/L	50	1/16/2024 1:15:08 PM
2-Methylnaphthalene	ND	20		µg/L	50	1/16/2024 1:15:08 PM
Acetone	ND	50		µg/L	50	1/16/2024 1:15:08 PM
Bromobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Bromodichloromethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Bromoform	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Bromomethane	ND	10		µg/L	50	1/16/2024 1:15:08 PM
2-Butanone	ND	50		µg/L	50	1/16/2024 1:15:08 PM
Carbon disulfide	ND	50		µg/L	50	1/16/2024 1:15:08 PM
Carbon tetrachloride	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Chlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Chloroethane	ND	10		µg/L	50	1/16/2024 1:15:08 PM
Chloroform	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Chloromethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
2-Chlorotoluene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
4-Chlorotoluene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
cis-1,2-DCE	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	1/16/2024 1:15:08 PM
Dibromochloromethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Dibromomethane	ND	10		µg/L	50	1/16/2024 1:15:08 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Dichlorodifluoromethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1-Dichloroethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1-Dichloroethene	ND	5.0		µg/L	50	1/16/2024 1:15:08 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.

Analytical Report
Lab Order **2401263**
Date Reported: **1/24/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-5-24
Project: Standard 1A
Collection Date: 1/5/2024 2:00:00 PM
Lab ID: 2401263-002 **Matrix:** AIR **Received Date:** 1/6/2024 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,2-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,3-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
2,2-Dichloropropane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Hexachlorobutadiene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
2-Hexanone	ND	50		µg/L	50	1/16/2024 1:15:08 PM
Isopropylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
4-Isopropyltoluene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
4-Methyl-2-pentanone	ND	50		µg/L	50	1/16/2024 1:15:08 PM
Methylene chloride	ND	15		µg/L	50	1/16/2024 1:15:08 PM
n-Butylbenzene	ND	15		µg/L	50	1/16/2024 1:15:08 PM
n-Propylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
sec-Butylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Styrene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
tert-Butylbenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
trans-1,2-DCE	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Trichloroethene (TCE)	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Trichlorofluoromethane	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
1,2,3-Trichloropropane	ND	10		µg/L	50	1/16/2024 1:15:08 PM
Vinyl chloride	ND	5.0		µg/L	50	1/16/2024 1:15:08 PM
Xylenes, Total	8.7	7.5		µg/L	50	1/16/2024 1:15:08 PM
Surr: Dibromofluoromethane	76.6	70-130		%Rec	50	1/16/2024 1:15:08 PM
Surr: 1,2-Dichloroethane-d4	87.6	70-130		%Rec	50	1/16/2024 1:15:08 PM
Surr: Toluene-d8	104	70-130		%Rec	50	1/16/2024 1:15:08 PM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	50	1/16/2024 1:15:08 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.		

ENERGY LABORATORIES
Trust our People. Trust our Data.
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Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

ANALYTICAL SUMMARY REPORT

January 18, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24010462 Quote ID: B15626

Project Name: Tedlar Gas Analysis

Energy Laboratories Inc Billings MT received the following 2 samples for Hall Environmental on 1/9/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24010462-001	2401263-001B Influent 1-4-24	01/04/24 14:30	01/09/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60
B24010462-002	2401263-002B Influent 1-5-24	01/05/24 14:00	01/09/24	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

ENERGY LABORATORIES
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www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Tedlar Gas Analysis
Lab ID: B24010462-001
Client Sample ID: 2401263-001B Influent 1-4-24

Report Date: 01/18/24
Collection Date: 01/04/24 14:30
DateReceived: 01/09/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	17.40	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Nitrogen	77.76	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Carbon Dioxide	4.80	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Hexanes plus	0.04	Mol %		0.01		GPA 2261-95	01/12/24 10:33 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
Hexanes plus	0.017	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
GPM Total	0.017	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
GPM Pentanes plus	0.017	gpm		0.001		GPA 2261-95	01/12/24 10:33 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-95	01/12/24 10:33 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-95	01/12/24 10:33 / jrj
Pseudo-critical Pressure, psia	562			1		GPA 2261-95	01/12/24 10:33 / jrj
Pseudo-critical Temperature, deg R	252			1		GPA 2261-95	01/12/24 10:33 / jrj
Specific Gravity @ 60/60F	1.02			0.001		D3588-81	01/12/24 10:33 / jrj
Air, %	79.49			0.01		GPA 2261-95	01/12/24 10:33 / jrj
- The analysis was not corrected for air.							

COMMENTS

-						-	01/12/24 10:33 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Tedlar Gas Analysis
Lab ID: B24010462-002
Client Sample ID: 2401263-002B Influent 1-5-24

Report Date: 01/18/24
Collection Date: 01/05/24 14:00
DateReceived: 01/09/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	20.83	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Nitrogen	77.88	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Carbon Dioxide	1.26	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	01/12/24 12:33 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	01/12/24 12:33 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	01/12/24 12:33 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	01/12/24 12:33 / jrj
Pseudo-critical Pressure, psia	550			1		GPA 2261-95	01/12/24 12:33 / jrj
Pseudo-critical Temperature, deg R	242			1		GPA 2261-95	01/12/24 12:33 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	01/12/24 12:33 / jrj
Air, %	95.17			0.01		GPA 2261-95	01/12/24 12:33 / jrj
- The analysis was not corrected for air.							

COMMENTS

-						-	01/12/24 12:33 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
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MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24010462 **Report Date:** 01/18/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95									Batch: R415281	
Lab ID: B24010462-001ADUP	12	Sample Duplicate				Run: GCNGA-B_240112A			01/12/24 11:25	
Oxygen		16.5	Mol %	0.01				5.6	20	
Nitrogen		79.0	Mol %	0.01				1.6	20	
Carbon Dioxide		4.53	Mol %	0.01				5.8	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.03	Mol %	0.01				29	20	R
Lab ID: B24010462-002ADUP	12	Sample Duplicate				Run: GCNGA-B_240112A			01/12/24 01:29	
Oxygen		20.8	Mol %	0.01				0.1	20	
Nitrogen		77.9	Mol %	0.01				0	20	
Carbon Dioxide		1.25	Mol %	0.01				0.8	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.03	Mol %	0.01				0.0	20	
Lab ID: LCS011224	11	Laboratory Control Sample				Run: GCNGA-B_240112A			01/12/24 02:31	
Oxygen		0.65	Mol %	0.01	130	70	130			
Nitrogen		6.51	Mol %	0.01	108	70	130			
Carbon Dioxide		1.00	Mol %	0.01	101	70	130			
Methane		74.3	Mol %	0.01	99	70	130			
Ethane		6.07	Mol %	0.01	101	70	130			
Propane		5.01	Mol %	0.01	101	70	130			
Isobutane		1.80	Mol %	0.01	90	70	130			
n-Butane		1.99	Mol %	0.01	99	70	130			
Isopentane		0.97	Mol %	0.01	97	70	130			
n-Pentane		0.94	Mol %	0.01	94	70	130			
Hexanes plus		0.78	Mol %	0.01	98	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

R - Relative Percent Difference (RPD) exceeds advisory limit

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Work Order Receipt Checklist

Hall Environmental

B24010462

Login completed by:	Crystal M. Jones	Date Received:	1/9/2024
Reviewed by:	agilbert	Received by:	DNH
Reviewed Date:	1/11/2024	Carrier name:	FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	12.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR: **Energy Labs -Billings**	COMPANY: **Energy Laboratories**	PHONE: **(406) 869-6253**	FAX: **(406) 252-6069**
ADDRESS: **1120 South 27th Street**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Billings, MT 59107**			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2401263-001B	Influent 1-4-24	TEDLAR	Air	1/4/2024 2:30:00 PM	1	Natural Gas Analysis- 02,CO2,CO
2	2401263-002B	Influent 1-5-24	TEDLAR	Air	1/5/2024 2:00:00 PM	1	Natural Gas Analysis- 02,CO2,CO

B24010462

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By: CMC	Date: 1/8/2024	Time: 8:42 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 1/9/24	Time: 0950

TAT: Standard ☑ **RUSH** Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401263**

24-Jan-24

Client: HILCORP ENERGY

Project: Standard 1A

Sample ID: **2401263-001adup**	SampType: **DUP**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Influent 1-4-24**	Batch ID: **GA102299**	RunNo: **102299**
Prep Date:	Analysis Date: **1/8/2024**	SeqNo: **3778216** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	3600	250						5.52	20	
Surr: BFB	110000		100000		109	15	412	0	0	

Qualifiers:

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

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Eurofins Environment Testing South Central, LLC
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: **2401263** RcptNo: **1**

Received By: **Cheyenne Cason** **1/6/2024 8:35:00 AM** CM

Completed By: **Cheyenne Cason** **1/6/2024 9:06:08 AM** CM

Reviewed By: 1/8/24

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 preserved 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 ☐	

✓ per COC MV 1/8/24

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

Adjusted? _____

Checked by: M 1/8/24

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: Mailing address and phone number are missing on COC- TMC 1/4/24

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Yes	NA		

Chain-of-Custody Record

Client: Hilcorp

Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mkillough@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard IA

Project #:

Project Manager: Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp (Including CF): NA (°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. 2401263	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)	O_2, CO_2
1-4-24	1430	Air	Influent 1-4-24	2 Tedlar		001		X						X			X
1-5-24	1400	Air	Influent 1-5-24	2 Tedlar		002		X						X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1-5-24	14:30		Courier		1/6/24 11/8/24	0835
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

cc: ecarroll@ensolum.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.

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

February 01, 2024

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

RE: Standard 1 OrderNo.: 2401653

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 1/17/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401653**
Date Reported: **2/1/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-12-24
Project: Standard 1
Collection Date: 1/12/2024 5:00:00 PM
Lab ID: 2401653-001 **Matrix:** AIR
Received Date: 1/17/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	6500	500		µg/L	100	1/25/2024 1:49:00 PM
Surr: BFB	116	15-412		%Rec	100	1/25/2024 1:49:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
Benzene	22	5.0		µg/L	50	1/25/2024 10:32:49 AM
Toluene	42	5.0		µg/L	50	1/25/2024 10:32:49 AM
Ethylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Naphthalene	ND	10		µg/L	50	1/25/2024 10:32:49 AM
1-Methylnaphthalene	ND	20		µg/L	50	1/25/2024 10:32:49 AM
2-Methylnaphthalene	ND	20		µg/L	50	1/25/2024 10:32:49 AM
Acetone	ND	50		µg/L	50	1/25/2024 10:32:49 AM
Bromobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Bromodichloromethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Bromoform	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Bromomethane	ND	10		µg/L	50	1/25/2024 10:32:49 AM
2-Butanone	ND	50		µg/L	50	1/25/2024 10:32:49 AM
Carbon disulfide	ND	50		µg/L	50	1/25/2024 10:32:49 AM
Carbon tetrachloride	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Chlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Chloroethane	ND	10		µg/L	50	1/25/2024 10:32:49 AM
Chloroform	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Chloromethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
2-Chlorotoluene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
4-Chlorotoluene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
cis-1,2-DCE	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	1/25/2024 10:32:49 AM
Dibromochloromethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Dibromomethane	ND	10		µg/L	50	1/25/2024 10:32:49 AM
1,2-Dichlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,3-Dichlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,4-Dichlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Dichlorodifluoromethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1-Dichloroethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1-Dichloroethene	ND	5.0		µg/L	50	1/25/2024 10:32:49 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	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.

Analytical Report
Lab Order **2401653**
Date Reported: **2/1/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-12-24
Project: Standard 1
Collection Date: 1/12/2024 5:00:00 PM
Lab ID: 2401653-001 **Matrix:** AIR
Received Date: 1/17/2024 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **JR**
1,2-Dichloropropane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,3-Dichloropropane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
2,2-Dichloropropane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1-Dichloropropene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Hexachlorobutadiene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
2-Hexanone	ND	50		µg/L	50	1/25/2024 10:32:49 AM
Isopropylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
4-Isopropyltoluene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
4-Methyl-2-pentanone	ND	50		µg/L	50	1/25/2024 10:32:49 AM
Methylene chloride	ND	15		µg/L	50	1/25/2024 10:32:49 AM
n-Butylbenzene	ND	15		µg/L	50	1/25/2024 10:32:49 AM
n-Propylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
sec-Butylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Styrene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
tert-Butylbenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
trans-1,2-DCE	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1,1-Trichloroethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,1,2-Trichloroethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Trichloroethene (TCE)	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Trichlorofluoromethane	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
1,2,3-Trichloropropane	ND	10		µg/L	50	1/25/2024 10:32:49 AM
Vinyl chloride	ND	5.0		µg/L	50	1/25/2024 10:32:49 AM
Xylenes, Total	56	7.5		µg/L	50	1/25/2024 10:32:49 AM
Surr: Dibromofluoromethane	71.8	70-130		%Rec	50	1/25/2024 10:32:49 AM
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%Rec	50	1/25/2024 10:32:49 AM
Surr: Toluene-d8	107	70-130		%Rec	50	1/25/2024 10:32:49 AM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	50	1/25/2024 10:32:49 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	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.		

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ANALYTICAL SUMMARY REPORT

January 23, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24010962 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 1/19/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24010962-001	2401653-001B, Influent 1-12-24	01/12/24 17:00	01/19/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B24010962-001
Client Sample ID: 2401653-001B, Influent 1-12-24

Report Date: 01/23/24
Collection Date: 01/12/24 17:00
DateReceived: 01/19/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	20.53	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Nitrogen	77.88	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Carbon Dioxide	1.49	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Hexanes plus	0.10	Mol %		0.01		GPA 2261-95	01/19/24 01:14 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
Hexanes plus	0.042	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
GPM Total	0.042	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
GPM Pentanes plus	0.042	gpm		0.001		GPA 2261-95	01/19/24 01:14 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	5			1		GPA 2261-95	01/19/24 01:14 / jrj
Net BTU per cu ft @ std cond. (LHV)	4			1		GPA 2261-95	01/19/24 01:14 / jrj
Pseudo-critical Pressure, psia	550			1		GPA 2261-95	01/19/24 01:14 / jrj
Pseudo-critical Temperature, deg R	243			1		GPA 2261-95	01/19/24 01:14 / jrj
Specific Gravity @ 60/60F	1.01			0.001		D3588-81	01/19/24 01:14 / jrj
Air, %	93.81			0.01		GPA 2261-95	01/19/24 01:14 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	01/19/24 01:14 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24010962 **Report Date:** 01/23/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95										Batch: R415411
Lab ID: B24010962-001ADUP	12	Sample Duplicate				Run: GCNGA-B_240119A				01/19/24 02:11
Oxygen		20.6	Mol %	0.01				0.2	20	
Nitrogen		77.8	Mol %	0.01				0	20	
Carbon Dioxide		1.49	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.09	Mol %	0.01				11	20	
Lab ID: LCS011924	11	Laboratory Control Sample				Run: GCNGA-B_240119A				01/19/24 03:01
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		5.93	Mol %	0.01	99	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		74.9	Mol %	0.01	100	70	130			
Ethane		6.05	Mol %	0.01	101	70	130			
Propane		4.96	Mol %	0.01	100	70	130			
Isobutane		1.91	Mol %	0.01	95	70	130			
n-Butane		1.98	Mol %	0.01	99	70	130			
Isopentane		0.97	Mol %	0.01	97	70	130			
n-Pentane		0.95	Mol %	0.01	95	70	130			
Hexanes plus		0.76	Mol %	0.01	95	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24010962

Login completed by: Danielle N. Harris
Date Received: 1/19/2024
Reviewed by: gmccartney
Received by: DNH
Reviewed Date: 1/19/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	6.0°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

B24010962

SUB CONTRATOR:	Energy Labs -Billings	COMPANY:	Energy Laboratories	PHONE: (406) 869-6253	FAX: (406) 252-6069
ADDRESS:	1120 South 27th Street			ACCOUNT #:	EMAIL:
CITY, STATE, ZIP:	Billings, MT 59107				

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2401653-001B	Influent 1-12-24	TEDLAR	Air	1/12/2024 5:00:00 PM	1	Natural Gas Analysis. CO2+02.

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 1/17/2024	Time: 8:25 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 1/19/24	Time: 1015

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ℃ Attempt to Cool ?
Comments:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401653**

01-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401653-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 1-12-24**	Batch ID: **R102691**	RunNo: **102691**
Prep Date:	Analysis Date: **1/25/2024**	SeqNo: **3793891** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	5.0						9.43	20	
Toluene	46	5.0						9.10	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	5.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2401653**

01-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401653-001adup**	SampType: **DUP**		TestCode: **EPA Method 8260B: Volatiles**		
Client ID: **Influent 1-12-24**	Batch ID: **R102691**		RunNo: **102691**		
Prep Date:	Analysis Date: **1/25/2024**		SeqNo: **3793891**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	64	7.5						12.8	20	
Surr: Dibromofluoromethane	36		50.00		72.2	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	41		50.00		82.4	70	130	0	0	
Surr: Toluene-d8	51		50.00		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	56		50.00		112	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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.		

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Eurofins Environment Testing South Central, LLC
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: **2401653** RcptNo: **1**

Received By: **Tracy Casarrubias** **1/17/2024 7:00:00 AM**

Completed By: **Tracy Casarrubias** **1/17/2024 7:49:50 AM**

Reviewed By: SCM 1/17/24

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: JM 1/17/24

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: Mailing address, phone number and Email/Fax are missing on COC- TMC 1/17/24

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Stuart Hyde

Sampler: Danny Burns

On Ice: ☐ Yes ☒ No

# of Coolers: 1

Cooler Temp(including CF): N/A (°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. 24011653	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) Full List	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Fixed Gas CO_2 & O_2
1-12-2024	17:00	Air	Influent H2-24	2-Tedlar	NA	001		X						X			X

Date:	Time:	Relinquished by:	Received by:	Via: courier	Date	Time
1-16-24	14:20				1/17/24	7:00
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

cc: dburns dhenemann@ensolum.com shyde

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.

eurofins | Environment Testing

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

February 08, 2024

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

RE: Standard 1 OrderNo.: 2401822

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 1/19/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401822**
Date Reported: **2/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-18-24
Project: Standard 1
Collection Date: 1/18/2024 3:15:00 PM
Lab ID: 2401822-001 **Matrix:** AIR **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	2700	500		µg/L	100	1/26/2024 2:22:00 PM
Surr: BFB	114	15-412		%Rec	100	1/26/2024 2:22:00 PM
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	21	5.0		µg/L	50	2/1/2024 12:01:00 PM
Toluene	28	5.0		µg/L	50	2/1/2024 12:01:00 PM
Ethylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Naphthalene	ND	10		µg/L	50	2/1/2024 12:01:00 PM
1-Methylnaphthalene	ND	20		µg/L	50	2/1/2024 12:01:00 PM
2-Methylnaphthalene	ND	20		µg/L	50	2/1/2024 12:01:00 PM
Acetone	ND	50		µg/L	50	2/1/2024 12:01:00 PM
Bromobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Bromodichloromethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Bromoform	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Bromomethane	ND	10		µg/L	50	2/1/2024 12:01:00 PM
2-Butanone	ND	50		µg/L	50	2/1/2024 12:01:00 PM
Carbon disulfide	ND	50		µg/L	50	2/1/2024 12:01:00 PM
Carbon tetrachloride	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Chlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Chloroethane	ND	10		µg/L	50	2/1/2024 12:01:00 PM
Chloroform	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Chloromethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
2-Chlorotoluene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
4-Chlorotoluene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
cis-1,2-DCE	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	2/1/2024 12:01:00 PM
Dibromochloromethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Dibromomethane	ND	10		µg/L	50	2/1/2024 12:01:00 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	50	2/1/2024 12:01:00 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2401822**
Date Reported: **2/8/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: Influent 1-18-24
Project: Standard 1
Collection Date: 1/18/2024 3:15:00 PM
Lab ID: 2401822-001 **Matrix:** AIR **Received Date:** 1/19/2024 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,2-Dichloropropane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,3-Dichloropropane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
2,2-Dichloropropane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1-Dichloropropene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Hexachlorobutadiene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
2-Hexanone	ND	50		µg/L	50	2/1/2024 12:01:00 PM
Isopropylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
4-Isopropyltoluene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
4-Methyl-2-pentanone	ND	50		µg/L	50	2/1/2024 12:01:00 PM
Methylene chloride	ND	15		µg/L	50	2/1/2024 12:01:00 PM
n-Butylbenzene	ND	15		µg/L	50	2/1/2024 12:01:00 PM
n-Propylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
sec-Butylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Styrene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
tert-Butylbenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
trans-1,2-DCE	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Trichloroethene (TCE)	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Trichlorofluoromethane	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
1,2,3-Trichloropropane	ND	10		µg/L	50	2/1/2024 12:01:00 PM
Vinyl chloride	ND	5.0		µg/L	50	2/1/2024 12:01:00 PM
Xylenes, Total	10	7.5		µg/L	50	2/1/2024 12:01:00 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	50	2/1/2024 12:01:00 PM
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	50	2/1/2024 12:01:00 PM
Surr: Toluene-d8	108	70-130		%Rec	50	2/1/2024 12:01:00 PM
Surr: 4-Bromofluorobenzene	135	70-130	S	%Rec	50	2/1/2024 12:01:00 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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ANALYTICAL SUMMARY REPORT

January 30, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24011068 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 1/23/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24011068-001	2401822-001B, Influent 1-18-24	01/18/24 15:15	01/23/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B24011068-001
Client Sample ID: 2401822-001B, Influent 1-18-24

Report Date: 01/30/24
Collection Date: 01/18/24 15:15
DateReceived: 01/23/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.30	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Nitrogen	78.23	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Carbon Dioxide	0.42	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Hexanes plus	0.04	Mol %		0.01		GPA 2261-95	01/26/24 11:35 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
Hexanes plus	0.017	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
GPM Total	0.017	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
GPM Pentanes plus	0.017	gpm		0.001		GPA 2261-95	01/26/24 11:35 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-95	01/26/24 11:35 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-95	01/26/24 11:35 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	01/26/24 11:35 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	01/26/24 11:35 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	01/26/24 11:35 / jrj
Air, %	97.31			0.01		GPA 2261-95	01/26/24 11:35 / jrj
- The analysis was not corrected for air.							

COMMENTS

-						-	01/26/24 11:35 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24011068 **Report Date:** 01/30/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R415720
Lab ID: **LCS012624**	11	Laboratory Control Sample				Run: GCNGA-B_240126A				01/26/24 02:28
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		6.37	Mol %	0.01	106	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		75.2	Mol %	0.01	101	70	130			
Ethane		6.08	Mol %	0.01	101	70	130			
Propane		4.48	Mol %	0.01	91	70	130			
Isobutane		1.60	Mol %	0.01	80	70	130			
n-Butane		2.03	Mol %	0.01	101	70	130			
Isopentane		0.97	Mol %	0.01	97	70	130			
n-Pentane		0.85	Mol %	0.01	85	70	130			
Hexanes plus		0.81	Mol %	0.01	101	70	130			
Lab ID: **B24011070-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240126A				01/26/24 01:16
Oxygen		21.8	Mol %	0.01				0.1	20	
Nitrogen		78.0	Mol %	0.01				0	20	
Carbon Dioxide		0.17	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.01	Mol %	0.01				0.0	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24011068

Login completed by: Addison A. Gilbert
Date Received: 1/23/2024
Reviewed by: ysmith
Received by: CMJ
Reviewed Date: 1/23/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	11.2°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR: **Energy Labs -Billings**	COMPANY: **Energy Laboratories**	PHONE: **(406) 869-6253**	FAX: **(406) 252-6069**
ADDRESS: **1120 South 27th Street**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Billings, MT 59107**			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2401822-001B	Influent 1-18-24	TEDLAR	Air	1/18/2024 3:15:00 PM	1	Natual Gas Analysis CO2+02

B24011068

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By: CMC	Date: 1/19/2024	Time: 12:04 PM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Crystal Jones	Date: 1/23/24	Time: 0950

TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401822**

08-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401822-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 1-18-24**	Batch ID: **R102809**	RunNo: **102809**
Prep Date:	Analysis Date: **2/1/2024**	SeqNo: **3799708** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	5.0						1.57	20	
Toluene	28	5.0						2.82	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	5.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2401822**

08-Feb-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2401822-001adup**	SampType: **DUP**		TestCode: **EPA Method 8260B: Volatiles**		
Client ID: **Influent 1-18-24**	Batch ID: **R102809**		RunNo: **102809**		
Prep Date:	Analysis Date: **2/1/2024**		SeqNo: **3799708**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	9.9	7.5						5.61	20	
Surr: Dibromofluoromethane	52		50.00		103	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	51		50.00		102	70	130	0	0	
Surr: Toluene-d8	53		50.00		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	67		50.00		133	70	130	0	0	S

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.		

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Eurofins Environment Testing South Central, LLC
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: 2401822 RcptNo: 1

Received By: Cheyenne Cason 1/19/2024 8:00:00 AM

Completed By: Cheyenne Cason 1/19/2024 11:54:00 AM

Reviewed By: 1-19-24

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: 1/19/24

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	NA	Good	Yes	NA		

Chain-of-Custody Record

Client: Hilcorp
Attn: Mitch Killough
Mailing Address:

Phone #:
email or Fax#:
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Standard #1
Project #:
Project Manager: Stuart Hyde
Sampler: D. Burns
On Ice: ☒ Yes ☐ No Marty
\# of Coolers: 1 ~~0~~ NA
Cooler Temp(Including CF): ~~0.5-0.1=0.4~~ (°C) cmc 1/19/24

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. 2401822	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) Full List	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Fixed Gas CO_2+O_2					
1-18-2024	15:15	Air	Influent 1-18-24	2-Tedlar	NA	001		X						X			X					

Date	Time	Relinquished by	Received by	Via	Date	Time
1-18-2024	1601	[signature]	[signature]		1/18/24	1601
1/18/24	1747	[signature]	[signature]	Courier	1/19/24	0800

Remarks: dhensmann
CC: shyde @ensolum.com
dburns

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.

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

February 22, 2024

Mitch Killough

Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX:

RE: Standard OrderNo.: 2402485

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 2/9/2024 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2402485**
Date Reported: **2/22/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: Influent 2-8-24
Project: Standard
Collection Date: 2/8/2024 12:00:00 PM
Lab ID: 2402485-001 **Matrix:** AIR **Received Date:** 2/9/2024 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	2200	250		µg/L	50	2/15/2024 11:45:49 AM	GW1031
Surr: BFB	113	15-412		%Rec	50	2/15/2024 11:45:49 AM	GW1031
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	19	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Toluene	31	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Ethylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Naphthalene	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
1-Methylnaphthalene	ND	20		µg/L	50	2/12/2024 2:40:00 PM	R103021
2-Methylnaphthalene	ND	20		µg/L	50	2/12/2024 2:40:00 PM	R103021
Acetone	ND	50		µg/L	50	2/12/2024 2:40:00 PM	R103021
Bromobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Bromodichloromethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Bromoform	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Bromomethane	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
2-Butanone	ND	50		µg/L	50	2/12/2024 2:40:00 PM	R103021
Carbon disulfide	ND	50		µg/L	50	2/12/2024 2:40:00 PM	R103021
Carbon tetrachloride	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Chlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Chloroethane	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
Chloroform	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Chloromethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
2-Chlorotoluene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
4-Chlorotoluene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
cis-1,2-DCE	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
Dibromochloromethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Dibromomethane	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2-Dichlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,3-Dichlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,4-Dichlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Dichlorodifluoromethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1-Dichloroethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1-Dichloroethene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021

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.		

Analytical Report
Lab Order **2402485**
Date Reported: **2/22/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: Influent 2-8-24
Project: Standard
Collection Date: 2/8/2024 12:00:00 PM
Lab ID: 2402485-001 **Matrix:** AIR **Received Date:** 2/9/2024 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,2-Dichloropropane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,3-Dichloropropane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
2,2-Dichloropropane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1-Dichloropropene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Hexachlorobutadiene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
2-Hexanone	ND	50		µg/L	50	2/12/2024 2:40:00 PM	R103021
Isopropylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
4-Isopropyltoluene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
4-Methyl-2-pentanone	ND	50		µg/L	50	2/12/2024 2:40:00 PM	R103021
Methylene chloride	ND	15		µg/L	50	2/12/2024 2:40:00 PM	R103021
n-Butylbenzene	ND	15		µg/L	50	2/12/2024 2:40:00 PM	R103021
n-Propylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
sec-Butylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Styrene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
tert-Butylbenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
trans-1,2-DCE	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1,1-Trichloroethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,1,2-Trichloroethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Trichloroethene (TCE)	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Trichlorofluoromethane	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
1,2,3-Trichloropropane	ND	10		µg/L	50	2/12/2024 2:40:00 PM	R103021
Vinyl chloride	ND	5.0		µg/L	50	2/12/2024 2:40:00 PM	R103021
Xylenes, Total	34	7.5		µg/L	50	2/12/2024 2:40:00 PM	R103021
Surr: Dibromofluoromethane	93.1	70-130		%Rec	50	2/12/2024 2:40:00 PM	R103021
Surr: 1,2-Dichloroethane-d4	84.7	70-130		%Rec	50	2/12/2024 2:40:00 PM	R103021
Surr: Toluene-d8	109	70-130		%Rec	50	2/12/2024 2:40:00 PM	R103021
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	50	2/12/2024 2:40:00 PM	R103021

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.		

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 406.252.6325 • Casper, WY 307.235.0515
Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

ANALYTICAL SUMMARY REPORT

February 21, 2024

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: B24020812 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 2/13/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24020812-001	2402485-001B, Influent 2-8-24	02/08/24 12:00	02/13/24	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B24020812-001
Client Sample ID: 2402485-001B, Influent 2-8-24

Report Date: 02/21/24
Collection Date: 02/08/24 12:00
DateReceived: 02/13/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.33	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Nitrogen	78.12	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Carbon Dioxide	0.51	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Hexanes plus	0.04	Mol %		0.01		GPA 2261-95	02/15/24 10:04 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
Hexanes plus	0.017	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
GPM Total	0.017	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
GPM Pentanes plus	0.017	gpm		0.001		GPA 2261-95	02/15/24 10:04 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-95	02/15/24 10:04 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-95	02/15/24 10:04 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	02/15/24 10:04 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	02/15/24 10:04 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	02/15/24 10:04 / jrj
Air, %	97.47			0.01		GPA 2261-95	02/15/24 10:04 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	02/15/24 10:04 / jrj

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B24020812 **Report Date:** 02/21/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95										Batch: R416751
Lab ID: B24020812-001ADUP	12	Sample Duplicate				Run: GCNGA-B_240215A				02/15/24 11:43
Oxygen		19.6	Mol %	0.01				8.4	20	
Nitrogen		79.9	Mol %	0.01				2.2	20	
Carbon Dioxide		0.47	Mol %	0.01				8.2	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		0.04	Mol %	0.01				0.0	20	
Lab ID: LCS021524	11	Laboratory Control Sample				Run: GCNGA-B_240215A				02/15/24 01:23
Oxygen		0.65	Mol %	0.01	130	70	130			
Nitrogen		6.34	Mol %	0.01	106	70	130			
Carbon Dioxide		1.01	Mol %	0.01	102	70	130			
Methane		74.4	Mol %	0.01	100	70	130			
Ethane		6.05	Mol %	0.01	101	70	130			
Propane		5.02	Mol %	0.01	102	70	130			
Isobutane		1.77	Mol %	0.01	88	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		0.99	Mol %	0.01	99	70	130			
n-Pentane		0.95	Mol %	0.01	95	70	130			
Hexanes plus		0.78	Mol %	0.01	98	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B24020812

Login completed by: Danielle N. Harris
Date Received: 2/13/2024
Reviewed by: ysmith
Received by: CMJ
Reviewed Date: 2/16/2024
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	14.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

None

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR: **Energy Labs -Billings**	COMPANY: **Energy Laboratories**		PHONE: **(406) 869-6253**	FAX: **(406) 252-6069**	
ADDRESS: **1120 South 27th Street**			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: **Billings, MT 59107**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2402485-001B	Influent 2-8-24	TEDLAR	Air	2/8/2024 12:00:00 PM	1	Natural Gas Analysis. CO2 + O2

B24020812

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofinsus.com. For Questions email Hall.samplecontrol@et.eurofinsus.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 2/9/2024	Time: 7:52 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Crystal Tafoya	Date: 2/13/24	Time: 0900

TAT: Standard ☐ **RUSH** Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ____ ℃ Attempt to Cool ? ____
Comments: ____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402485**

22-Feb-24

Client: Hilcorp Energy

Project: Standard

Sample ID: **2402485-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 2-8-24**	Batch ID: **R103021**	RunNo: **103021**
Prep Date:	Analysis Date: **2/12/2024**	SeqNo: **3808533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	5.0						5.84	20	
Toluene	28	5.0						11.3	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	5.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2402485**

22-Feb-24

Client: Hilcorp Energy

Project: Standard

Sample ID: **2402485-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **Influent 2-8-24**	Batch ID: **R103021**	RunNo: **103021**
Prep Date:	Analysis Date: **2/12/2024**	SeqNo: **3808533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	29	7.5						16.4	20	
Surr: Dibromofluoromethane	48		50.00		95.2	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	46		50.00		92.8	70	130	0	0	
Surr: Toluene-d8	54		50.00		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	51		50.00		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
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: **2402485** RcptNo: **1**

Received By: **Tracy Casarrubias** **2/9/2024 6:35:00 AM**

Completed By: **Tracy Casarrubias** **2/9/2024 7:45:41 AM**

Reviewed By: TMC 2/9/24

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: TMC 2/9/24

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:

Mailing address and phone number are missing on COC- TMC 2/9/24

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Not Present			

Chain-of-Custody Record

Client: Hilcorp

Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mkillough@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Standard

Project #:

Project Manager:

Stuart Hyde - Ensolum

Sampler: E. Carroll

On Ice: ~~☐ Yes~~ ☒ No

# of Coolers:

Cooler Temp(Including CF): N/A (°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. 2402485	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)	O_2, CO_2
2-8	12:00	Air	Influent 2-8-24	2 Tedlar	None	001		X						X			X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/8	1343				2/8/24	1343
2/8/24	1723			courier	2/9/24	0:35

Remarks:

cc: shyde@ensolum.com

ecarroll@ensolum.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.

ENSOLUM

APPENDIX D

Groundwater 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: www.hallenvironmental.com

December 22, 2022

Stuart Hyde
Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX:

RE: Standard 1 OrderNo.: 2212578

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 13 sample(s) on 12/9/2022 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 **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-02
Project: Standard 1
Collection Date: 12/8/2022 3:33:00 PM
Lab ID: 2212578-001 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	16000	200		µg/L	200	12/15/2022 1:58:57 PM	SL93331
Toluene	2500	200		µg/L	200	12/15/2022 1:58:57 PM	SL93331
Ethylbenzene	1900	200		µg/L	200	12/15/2022 1:58:57 PM	SL93331
Xylenes, Total	18000	300		µg/L	200	12/15/2022 1:58:57 PM	SL93331
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%Rec	200	12/15/2022 1:58:57 PM	SL93331
Surr: Dibromofluoromethane	93.5	70-130		%Rec	200	12/15/2022 1:58:57 PM	SL93331
Surr: Toluene-d8	106	70-130		%Rec	200	12/15/2022 1:58:57 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-03
Project: Standard 1
Collection Date: 12/8/2022 3:18:00 PM
Lab ID: 2212578-002 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	17000	200		µg/L	200	12/15/2022 2:27:38 PM	SL93331
Toluene	1000	200		µg/L	200	12/15/2022 2:27:38 PM	SL93331
Ethylbenzene	730	200		µg/L	200	12/15/2022 2:27:38 PM	SL93331
Xylenes, Total	6800	300		µg/L	200	12/15/2022 2:27:38 PM	SL93331
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	200	12/15/2022 2:27:38 PM	SL93331
Surr: Dibromofluoromethane	92.5	70-130		%Rec	200	12/15/2022 2:27:38 PM	SL93331
Surr: Toluene-d8	107	70-130		%Rec	200	12/15/2022 2:27:38 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-08
Project: Standard 1
Collection Date: 12/8/2022 1:04:00 PM
Lab ID: 2212578-003 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/15/2022 2:56:22 PM	SL93331
Toluene	ND	1.0		µg/L	1	12/15/2022 2:56:22 PM	SL93331
Ethylbenzene	ND	1.0		µg/L	1	12/15/2022 2:56:22 PM	SL93331
Xylenes, Total	ND	1.5		µg/L	1	12/15/2022 2:56:22 PM	SL93331
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/15/2022 2:56:22 PM	SL93331
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/15/2022 2:56:22 PM	SL93331
Surr: Toluene-d8	109	70-130		%Rec	1	12/15/2022 2:56:22 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-11
Project: Standard 1
Collection Date: 12/8/2022 12:00:00 PM
Lab ID: 2212578-004
Matrix: GROUNDWA
Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/15/2022 3:25:01 PM	SL93331
Toluene	ND	1.0		µg/L	1	12/15/2022 3:25:01 PM	SL93331
Ethylbenzene	ND	1.0		µg/L	1	12/15/2022 3:25:01 PM	SL93331
Xylenes, Total	ND	1.5		µg/L	1	12/15/2022 3:25:01 PM	SL93331
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/15/2022 3:25:01 PM	SL93331
Surr: Dibromofluoromethane	100	70-130		%Rec	1	12/15/2022 3:25:01 PM	SL93331
Surr: Toluene-d8	107	70-130		%Rec	1	12/15/2022 3:25:01 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-12
Project: Standard 1
Collection Date: 12/8/2022 2:02:00 PM
Lab ID: 2212578-005 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	41	20		µg/L	20	12/15/2022 3:53:44 PM	SL93331
Toluene	ND	20		µg/L	20	12/15/2022 3:53:44 PM	SL93331
Ethylbenzene	ND	20		µg/L	20	12/15/2022 3:53:44 PM	SL93331
Xylenes, Total	ND	30		µg/L	20	12/15/2022 3:53:44 PM	SL93331
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	20	12/15/2022 3:53:44 PM	SL93331
Surr: Dibromofluoromethane	98.3	70-130		%Rec	20	12/15/2022 3:53:44 PM	SL93331
Surr: Toluene-d8	106	70-130		%Rec	20	12/15/2022 3:53:44 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy **Client Sample ID:** MW-14
Project: Standard 1 **Collection Date:** 12/8/2022 2:41:00 PM
Lab ID: 2212578-006 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	3800	200		µg/L	200	12/15/2022 4:22:24 PM	SL93331
Toluene	1800	200		µg/L	200	12/15/2022 4:22:24 PM	SL93331
Ethylbenzene	1600	200		µg/L	200	12/15/2022 4:22:24 PM	SL93331
Xylenes, Total	9500	300		µg/L	200	12/15/2022 4:22:24 PM	SL93331
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%Rec	200	12/15/2022 4:22:24 PM	SL93331
Surr: Dibromofluoromethane	90.7	70-130		%Rec	200	12/15/2022 4:22:24 PM	SL93331
Surr: Toluene-d8	107	70-130		%Rec	200	12/15/2022 4:22:24 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-15
Project: Standard 1
Collection Date: 12/8/2022 3:00:00 PM
Lab ID: 2212578-007 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	25000	500		µg/L	500	12/15/2022 4:51:00 PM	SL93331
Toluene	4900	500		µg/L	500	12/15/2022 4:51:00 PM	SL93331
Ethylbenzene	540	500		µg/L	500	12/15/2022 4:51:00 PM	SL93331
Xylenes, Total	4800	750		µg/L	500	12/15/2022 4:51:00 PM	SL93331
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	500	12/15/2022 4:51:00 PM	SL93331
Surr: Dibromofluoromethane	96.2	70-130		%Rec	500	12/15/2022 4:51:00 PM	SL93331
Surr: Toluene-d8	110	70-130		%Rec	500	12/15/2022 4:51:00 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-16
Project: Standard 1
Collection Date: 12/8/2022 2:22:00 PM
Lab ID: 2212578-008 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	150	50		µg/L	50	12/15/2022 5:19:37 PM	SL93331
Toluene	ND	50		µg/L	50	12/15/2022 5:19:37 PM	SL93331
Ethylbenzene	380	50		µg/L	50	12/15/2022 5:19:37 PM	SL93331
Xylenes, Total	2100	75		µg/L	50	12/15/2022 5:19:37 PM	SL93331
Surr: 1,2-Dichloroethane-d4	118	70-130		%Rec	50	12/15/2022 5:19:37 PM	SL93331
Surr: Dibromofluoromethane	99.7	70-130		%Rec	50	12/15/2022 5:19:37 PM	SL93331
Surr: Toluene-d8	106	70-130		%Rec	50	12/15/2022 5:19:37 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy **Client Sample ID:** MW-18
Project: Standard 1 **Collection Date:** 12/8/2022 12:27:00 PM
Lab ID: 2212578-009 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	6700	500		µg/L	500	12/16/2022 2:43:11 PM	SL93377
Toluene	ND	50		µg/L	50	12/15/2022 5:48:17 PM	SL93331
Ethylbenzene	360	50		µg/L	50	12/15/2022 5:48:17 PM	SL93331
Xylenes, Total	ND	75		µg/L	50	12/15/2022 5:48:17 PM	SL93331
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	50	12/15/2022 5:48:17 PM	SL93331
Surr: Dibromofluoromethane	104	70-130		%Rec	50	12/15/2022 5:48:17 PM	SL93331
Surr: Toluene-d8	105	70-130		%Rec	50	12/15/2022 5:48:17 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy **Client Sample ID:** MW-19
Project: Standard 1 **Collection Date:** 12/8/2022 1:47:00 PM
Lab ID: 2212578-010 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	12000	200		µg/L	200	12/15/2022 6:16:57 PM	SL93331
Toluene	14000	200		µg/L	200	12/15/2022 6:16:57 PM	SL93331
Ethylbenzene	1300	200		µg/L	200	12/15/2022 6:16:57 PM	SL93331
Xylenes, Total	7800	300		µg/L	200	12/15/2022 6:16:57 PM	SL93331
Surr: 1,2-Dichloroethane-d4	98.4	70-130		%Rec	200	12/15/2022 6:16:57 PM	SL93331
Surr: Dibromofluoromethane	89.2	70-130		%Rec	200	12/15/2022 6:16:57 PM	SL93331
Surr: Toluene-d8	109	70-130		%Rec	200	12/15/2022 6:16:57 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy **Client Sample ID:** MW-22
Project: Standard 1 **Collection Date:** 12/8/2022 12:13:00 PM
Lab ID: 2212578-011 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	ND	2.0		µg/L	2	12/15/2022 6:45:28 PM	SL93331
Toluene	ND	2.0		µg/L	2	12/15/2022 6:45:28 PM	SL93331
Ethylbenzene	ND	2.0		µg/L	2	12/15/2022 6:45:28 PM	SL93331
Xylenes, Total	ND	3.0		µg/L	2	12/15/2022 6:45:28 PM	SL93331
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	2	12/15/2022 6:45:28 PM	SL93331
Surr: Dibromofluoromethane	96.7	70-130		%Rec	2	12/15/2022 6:45:28 PM	SL93331
Surr: Toluene-d8	107	70-130		%Rec	2	12/15/2022 6:45:28 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-23
Project: Standard 1
Collection Date: 12/8/2022 1:26:00 PM
Lab ID: 2212578-012 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	ND	2.0		µg/L	2	12/15/2022 7:14:02 PM	SL93331
Toluene	ND	2.0		µg/L	2	12/15/2022 7:14:02 PM	SL93331
Ethylbenzene	ND	2.0		µg/L	2	12/15/2022 7:14:02 PM	SL93331
Xylenes, Total	ND	3.0		µg/L	2	12/15/2022 7:14:02 PM	SL93331
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	2	12/15/2022 7:14:02 PM	SL93331
Surr: Dibromofluoromethane	104	70-130		%Rec	2	12/15/2022 7:14:02 PM	SL93331
Surr: Toluene-d8	106	70-130		%Rec	2	12/15/2022 7:14:02 PM	SL93331

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.		

Analytical Report
Lab Order **2212578**
Date Reported: **12/22/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: MW-26
Project: Standard 1
Collection Date: 12/8/2022 12:53:00 PM
Lab ID: 2212578-013 **Matrix:** GROUNDWA **Received Date:** 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/15/2022 7:42:35 PM	SL93331
Toluene	ND	1.0		µg/L	1	12/15/2022 7:42:35 PM	SL93331
Ethylbenzene	ND	1.0		µg/L	1	12/15/2022 7:42:35 PM	SL93331
Xylenes, Total	ND	1.5		µg/L	1	12/15/2022 7:42:35 PM	SL93331
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	12/15/2022 7:42:35 PM	SL93331
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	12/15/2022 7:42:35 PM	SL93331
Surr: Toluene-d8	105	70-130		%Rec	1	12/15/2022 7:42:35 PM	SL93331

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#: **2212578**

22-Dec-22

Client: Hilcorp Energy

Project: Standard 1

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL93331**	RunNo: **93331**
Prep Date:	Analysis Date: **12/15/2022**	SeqNo: **3364580** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.5	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: **SL93331**	RunNo: **93331**
Prep Date:	Analysis Date: **12/15/2022**	SeqNo: **3364602** 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		115	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Sample ID: **100ng lcs4**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL93377**	RunNo: **93377**
Prep Date:	Analysis Date: **12/17/2022**	SeqNo: **3367222** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.7	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL93377**	RunNo: **93377**
Prep Date:	Analysis Date: **12/17/2022**	SeqNo: **3367236** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	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 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#: **2212578**

22-Dec-22

Client: Hilcorp Energy

Project: Standard 1

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL93377**	RunNo: **93377**
Prep Date:	Analysis Date: **12/17/2022**	SeqNo: **3367236** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.2		10.00		92.2	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID: **100ng lcs3**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL93377**	RunNo: **93377**
Prep Date:	Analysis Date: **12/16/2022**	SeqNo: **3367237** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL93377**	RunNo: **93377**
Prep Date:	Analysis Date: **12/16/2022**	SeqNo: **3367238** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		104	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: 2212578 RcptNo: 1

Received By: Tracy Casarrubias 12/9/2022 7:35:00 AM

Completed By: Sean Livingston 12/9/2022 9:58:39 AM Sean Livingston

Reviewed By: JA 12-9-22

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: JA 12/9/22

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	0.7	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mKillough@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard (5-day) ☐ Rush

Project Name: Standard #1

Project #: 07A1988017

Project Manager: Stuart Hyde shyde@ensolum.com

Sampler: Reece Hanson/Zach Myers

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (Including CF): 0.6 +0.1 = 0.7 (°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. 2212578	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)
12/8/22	1533	GW	MW02	3, VOA	HCl	001	X									
	1518		MW-03			002	X									
	1304		MW-08			003	X									
	1200		MW-11			004	X									
	1402		MW-12			005	X									
	1441		MW-14			006	X									
	1500		MW-15			007	X									
	1422		MW-16			008	X									
	1227		MW-18			009	X									
	1347		MW-19			010	X									
	1213		MW-22			011	X									
	1326		MW-23			012	X									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/8/22	1636				12/8/22	1636
12/8/22	1819			Courier	12/9/22	7:35

Remarks: cc: rhanson zmyers@ensolum.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.

Chain-of-Custody Record

Client: HILCORP

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

5-day

☒ Standard ☐ Rush

Project Name: Standard H/

Project #:

Project Manager: Stuart Hyde

Sampler: R/T/ZM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 0.6 +0.1 = 0.7 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212578	Analysis Request: 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)
12/8/22	1253	GW	MW-26	3 VOA	HCl	003	X									

Relinquished by:	Date	Time	Received by:	Via:	Date	Time
	12/8/22	1636			12/9/22	1636
	12/8/22	1819		Courier	12/9/22	7:35

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

March 10, 2023

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

RE: Standard 1 OrderNo.: 2303170

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 13 sample(s) on 3/3/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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: **2303170**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2303170
Project: Standard 1

Lab ID: 2303170-001 **Collection Date:** 3/2/2023 3:06:00 PM
Client Sample ID: MW-03 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	17000	200		µg/L	200	3/7/2023 11:33:00 AM	R9507E
Toluene	1100	200		µg/L	200	3/7/2023 11:33:00 AM	R9507E
Ethylbenzene	650	200		µg/L	200	3/7/2023 11:33:00 AM	R9507E
Xylenes, Total	5600	400		µg/L	200	3/7/2023 11:33:00 AM	R9507E
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	200	3/7/2023 11:33:00 AM	R9507E

Lab ID: 2303170-002 **Collection Date:** 3/2/2023 2:40:00 PM
Client Sample ID: MW-04 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	320	8.0		µg/L	20	3/7/2023 11:54:00 AM	R9507E
Toluene	ND	8.0		µg/L	20	3/7/2023 11:54:00 AM	R9507E
Ethylbenzene	ND	8.0		µg/L	20	3/7/2023 11:54:00 AM	R9507E
Xylenes, Total	ND	16		µg/L	20	3/7/2023 11:54:00 AM	R9507E
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	20	3/7/2023 11:54:00 AM	R9507E

Lab ID: 2303170-003 **Collection Date:** 3/2/2023 11:44:00 AM
Client Sample ID: MW-08 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/7/2023 12:16:00 PM	R9507E
Toluene	ND	1.0		µg/L	1	3/7/2023 12:16:00 PM	R9507E
Ethylbenzene	ND	1.0		µg/L	1	3/7/2023 12:16:00 PM	R9507E
Xylenes, Total	ND	2.0		µg/L	1	3/7/2023 12:16:00 PM	R9507E
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/7/2023 12:16:00 PM	R9507E

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 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

Analytical Report
Lab Order: **2303170**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2303170
Project: Standard 1

Lab ID: 2303170-004 **Collection Date:** 3/2/2023 12:52:00 PM
Client Sample ID: MW-11 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/7/2023 12:38:00 PM	R9507E
Toluene	ND	1.0		µg/L	1	3/7/2023 12:38:00 PM	R9507E
Ethylbenzene	ND	1.0		µg/L	1	3/7/2023 12:38:00 PM	R9507E
Xylenes, Total	ND	2.0		µg/L	1	3/7/2023 12:38:00 PM	R9507E
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/7/2023 12:38:00 PM	R9507E

Lab ID: 2303170-005 **Collection Date:** 3/2/2023 1:47:00 PM
Client Sample ID: MW-12 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	43	1.0		µg/L	1	3/7/2023 6:01:00 PM	R9507E
Toluene	1.0	1.0		µg/L	1	3/7/2023 6:01:00 PM	R9507E
Ethylbenzene	3.6	1.0		µg/L	1	3/7/2023 6:01:00 PM	R9507E
Xylenes, Total	3.2	2.0		µg/L	1	3/7/2023 6:01:00 PM	R9507E
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	3/7/2023 6:01:00 PM	R9507E

Lab ID: 2303170-006 **Collection Date:** 3/2/2023 2:05:00 PM
Client Sample ID: MW-15 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	21000	500		µg/L	500	3/7/2023 1:21:00 PM	R9507E
Toluene	6000	500		µg/L	500	3/7/2023 1:21:00 PM	R9507E
Ethylbenzene	610	500		µg/L	500	3/7/2023 1:21:00 PM	R9507E
Xylenes, Total	4600	1000		µg/L	500	3/7/2023 1:21:00 PM	R9507E
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	500	3/7/2023 1:21:00 PM	R9507E

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.		

Analytical Report
Lab Order: **2303170**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2303170
Project: Standard 1

Lab ID: 2303170-007 **Collection Date:** 3/2/2023 1:25:00 PM
Client Sample ID: MW-16 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	110	20		µg/L	50	3/7/2023 1:42:00 PM	R9507E
Toluene	ND	20		µg/L	50	3/7/2023 1:42:00 PM	R9507E
Ethylbenzene	320	20		µg/L	50	3/7/2023 1:42:00 PM	R9507E
Xylenes, Total	1800	40		µg/L	50	3/7/2023 1:42:00 PM	R9507E
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	50	3/7/2023 1:42:00 PM	R9507E

Lab ID: 2303170-008 **Collection Date:** 3/2/2023 1:07:00 PM
Client Sample ID: MW-17 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	2.0		µg/L	2	3/7/2023 2:04:00 PM	R9507E
Toluene	ND	2.0		µg/L	2	3/7/2023 2:04:00 PM	R9507E
Ethylbenzene	ND	2.0		µg/L	2	3/7/2023 2:04:00 PM	R9507E
Xylenes, Total	ND	4.0		µg/L	2	3/7/2023 2:04:00 PM	R9507E
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	2	3/7/2023 2:04:00 PM	R9507E

Lab ID: 2303170-009 **Collection Date:** 3/2/2023 12:20:00 PM
Client Sample ID: MW-18 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	4200	20		µg/L	50	3/7/2023 2:47:00 PM	R9507E
Toluene	ND	20		µg/L	50	3/7/2023 2:47:00 PM	R9507E
Ethylbenzene	190	20		µg/L	50	3/7/2023 2:47:00 PM	R9507E
Xylenes, Total	ND	40		µg/L	50	3/7/2023 2:47:00 PM	R9507E
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	50	3/7/2023 2:47:00 PM	R9507E

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 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

Analytical Report
Lab Order: **2303170**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2303170
Project: Standard 1

Lab ID: 2303170-010 **Collection Date:** 3/2/2023 11:05:00 AM
Client Sample ID: MW-19 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	10000	200		µg/L	200	3/7/2023 3:52:00 PM	R9507E
Toluene	12000	200		µg/L	200	3/7/2023 3:52:00 PM	R9507E
Ethylbenzene	1000	200		µg/L	200	3/7/2023 3:52:00 PM	R9507E
Xylenes, Total	6100	400		µg/L	200	3/7/2023 3:52:00 PM	R9507E
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	3/7/2023 3:52:00 PM	R9507E

Lab ID: 2303170-011 **Collection Date:** 3/2/2023 12:36:00 PM
Client Sample ID: MW-22 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	2.0		µg/L	2	3/7/2023 4:14:00 PM	R9507E
Toluene	ND	2.0		µg/L	2	3/7/2023 4:14:00 PM	R9507E
Ethylbenzene	ND	2.0		µg/L	2	3/7/2023 4:14:00 PM	R9507E
Xylenes, Total	ND	4.0		µg/L	2	3/7/2023 4:14:00 PM	R9507E
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	2	3/7/2023 4:14:00 PM	R9507E

Lab ID: 2303170-012 **Collection Date:** 3/2/2023 11:30:00 AM
Client Sample ID: MW-23 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	2.0		µg/L	2	3/7/2023 4:35:00 PM	R9507E
Toluene	ND	2.0		µg/L	2	3/7/2023 4:35:00 PM	R9507E
Ethylbenzene	ND	2.0		µg/L	2	3/7/2023 4:35:00 PM	R9507E
Xylenes, Total	ND	4.0		µg/L	2	3/7/2023 4:35:00 PM	R9507E
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	2	3/7/2023 4:35:00 PM	R9507E

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 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

Analytical Report
Lab Order: **2303170**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2303170
Project: Standard 1

Lab ID: 2303170-013 **Collection Date:** 3/2/2023 12:05:00 PM
Client Sample ID: MW-26 **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/7/2023 4:57:00 PM	R95078
Toluene	ND	1.0		µg/L	1	3/7/2023 4:57:00 PM	R95078
Ethylbenzene	ND	1.0		µg/L	1	3/7/2023 4:57:00 PM	R95078
Xylenes, Total	ND	2.0		µg/L	1	3/7/2023 4:57:00 PM	R95078
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	3/7/2023 4:57:00 PM	R95078

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#: **2303170**
10-Mar-23

Client: HILCORP ENERGY
Project: Standard 1

Sample ID: **100 ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R95078** RunNo: **95078**
Prep Date: Analysis Date: **3/7/2023** SeqNo: **3438296** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.2	70	130			
Toluene	18	1.0	20.00	0	91.6	70	130			
Ethylbenzene	19	1.0	20.00	0	93.0	70	130			
Xylenes, Total	56	2.0	60.00	0	92.6	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		105	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R95078** RunNo: **95078**
Prep Date: Analysis Date: **3/7/2023** SeqNo: **3438298** 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	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.8	70	130			

Sample ID: **2303170-013ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-26** Batch ID: **R95078** RunNo: **95078**
Prep Date: Analysis Date: **3/7/2023** SeqNo: **3439132** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.5	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Ethylbenzene	20	1.0	20.00	0	99.2	70	130			
Xylenes, Total	59	2.0	60.00	0	98.5	70	130			
Surr: 4-Bromofluorobenzene	20		20.00		97.5	70	130			

Sample ID: **2303170-013amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-26** Batch ID: **R95078** RunNo: **95078**
Prep Date: Analysis Date: **3/7/2023** SeqNo: **3439133** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.5	70	130	6.31	20	
Toluene	19	1.0	20.00	0	92.8	70	130	6.38	20	
Ethylbenzene	19	1.0	20.00	0	93.3	70	130	6.11	20	
Xylenes, Total	56	2.0	60.00	0	93.5	70	130	5.26	20	
Surr: 4-Bromofluorobenzene	19		20.00		97.4	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

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: 2303170 RcptNo: 1

Received By: Tracy Casarrubias 3/3/2023 6:45:00 AM

Completed By: Tracy Casarrubias 3/3/2023 6:58:06 AM

Reviewed By: JA 3-3-23

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: KRa 3-8-23 KRa 3-3-23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes	Morty		

Chain-of-Custody Record

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mkillough@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

5-day

☒ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Danny Burns dburns@ensolum.com

Sampler: Reece Hanson / Cale Adams

On Ice: ☒ Yes ☐ No mark

# of Coolers: 1

Cooler Temp(Including CF): 1.8 - 0 = 1.8 (°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. 2303170	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)
3/2/23	1506	GW	MW-03	3, VOA	HgCl2	001	X									
	1410		MW-04		HCl	002										
	1144		MW-08			003										
	1252		MW-11			004										
	1347		MW-12			005										
	1405		MW-15			006										
	1325		MW-16			007										
	1307		MW-17			008										
	1220		MW-18			009										
	1105		MW-19			010										
	1236		MW-22			011										
	1130		MW-23			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/2/23	1545				3/2/23	1545
3/2/23	1806				3/3/23	0:45

Remarks: cc: rhanson@ensolum.com skyle@"

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.

page 2 of 2

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Hilcorp

Attn: Mitch Killough

Mailing Address:

Phone #:

email or Fax#: mkillough@hilcorp.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

5-day

☑ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Danny Burns

dburns@ensolum.com

Sampler: RH/CA

On Ice: ☑ Yes ☐ No mostly

# of Coolers: 1

Cooler Temp(including CF): 1.8 - 0 = 1.8 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
2/27/23	1205	GW	MW-26	3, VOA	HCl	

Analysis Request

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)
X									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/2/23	1545				3/2/23	1545
3/2/23	1806			courier	3/3/23	6:45

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

June 26, 2023

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

RE: Standard 1 OrderNo.: 2306949

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 13 sample(s) on 6/17/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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: **2306949**
Date Reported: **6/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2306949
Project: Standard 1

Lab ID: 2306949-001 **Collection Date:** 6/16/2023 11:30:00 AM
Client Sample ID: MW-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	16000	200		µg/L	200	6/21/2023 9:55:00 PM	R97604
Toluene	1800	200		µg/L	200	6/21/2023 9:55:00 PM	R97604
Ethylbenzene	680	200		µg/L	200	6/21/2023 9:55:00 PM	R97604
Xylenes, Total	6200	400		µg/L	200	6/21/2023 9:55:00 PM	R97604
Surr: 4-Bromofluorobenzene	98.9	52.4-148		%Rec	200	6/21/2023 9:55:00 PM	R97604

Lab ID: 2306949-002 **Collection Date:** 6/16/2023 12:20:00 PM
Client Sample ID: MW-8 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	1.0		µg/L	1	6/21/2023 10:17:00 PM	R97604
Toluene	ND	1.0		µg/L	1	6/21/2023 10:17:00 PM	R97604
Ethylbenzene	ND	1.0		µg/L	1	6/21/2023 10:17:00 PM	R97604
Xylenes, Total	ND	2.0		µg/L	1	6/21/2023 10:17:00 PM	R97604
Surr: 4-Bromofluorobenzene	98.4	52.4-148		%Rec	1	6/21/2023 10:17:00 PM	R97604

Lab ID: 2306949-003 **Collection Date:** 6/16/2023 2:10:00 PM
Client Sample ID: MW-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	21	1.0		µg/L	1	6/21/2023 11:23:00 PM	R97604
Toluene	27	1.0		µg/L	1	6/21/2023 11:23:00 PM	R97604
Ethylbenzene	1.9	1.0		µg/L	1	6/21/2023 11:23:00 PM	R97604
Xylenes, Total	15	2.0		µg/L	1	6/21/2023 11:23:00 PM	R97604
Surr: 4-Bromofluorobenzene	107	52.4-148		%Rec	1	6/21/2023 11:23:00 PM	R97604

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.

Analytical Report
Lab Order: **2306949**
Date Reported: **6/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2306949
Project: Standard 1

Lab ID: 2306949-004 **Collection Date:** 6/16/2023 10:40:00 AM
Client Sample ID: MW-11 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	1.0		µg/L	1	6/21/2023 11:45:00 PM	R97604
Toluene	ND	1.0		µg/L	1	6/21/2023 11:45:00 PM	R97604
Ethylbenzene	ND	1.0		µg/L	1	6/21/2023 11:45:00 PM	R97604
Xylenes, Total	ND	2.0		µg/L	1	6/21/2023 11:45:00 PM	R97604
Surr: 4-Bromofluorobenzene	97.6	52.4-148		%Rec	1	6/21/2023 11:45:00 PM	R97604

Lab ID: 2306949-005 **Collection Date:** 6/16/2023 9:55:00 AM
Client Sample ID: MW-12 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	52	1.0		µg/L	1	6/22/2023 12:07:00 AM	R97604
Toluene	ND	1.0		µg/L	1	6/22/2023 12:07:00 AM	R97604
Ethylbenzene	5.7	1.0		µg/L	1	6/22/2023 12:07:00 AM	R97604
Xylenes, Total	2.9	2.0		µg/L	1	6/22/2023 12:07:00 AM	R97604
Surr: 4-Bromofluorobenzene	117	52.4-148		%Rec	1	6/22/2023 12:07:00 AM	R97604

Lab ID: 2306949-006 **Collection Date:** 6/16/2023 10:04:00 AM
Client Sample ID: MW-15 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	21000	500		µg/L	500	6/22/2023 9:02:00 PM	R97645
Toluene	7600	200		µg/L	200	6/22/2023 12:29:00 AM	R97604
Ethylbenzene	470	200		µg/L	200	6/22/2023 12:29:00 AM	R97604
Xylenes, Total	3500	400		µg/L	200	6/22/2023 12:29:00 AM	R97604
Surr: 4-Bromofluorobenzene	97.2	52.4-148		%Rec	200	6/22/2023 12:29:00 AM	R97604

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 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

Analytical Report
Lab Order: **2306949**
Date Reported: **6/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2306949
Project: Standard 1

Lab ID: 2306949-007 **Collection Date:** 6/16/2023 2:30:00 PM
Client Sample ID: MW-16 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	100	50		µg/L	50	6/22/2023 9:24:00 PM	R97645
Toluene	ND	50		µg/L	50	6/22/2023 9:24:00 PM	R97645
Ethylbenzene	340	50		µg/L	50	6/22/2023 9:24:00 PM	R97645
Xylenes, Total	1100	100		µg/L	50	6/22/2023 9:24:00 PM	R97645
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	50	6/22/2023 9:24:00 PM	R97645

Lab ID: 2306949-008 **Collection Date:** 6/16/2023 1:30:00 PM
Client Sample ID: MW-17 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	1.0		µg/L	1	6/22/2023 1:12:00 AM	R97604
Toluene	ND	1.0		µg/L	1	6/22/2023 1:12:00 AM	R97604
Ethylbenzene	ND	1.0		µg/L	1	6/22/2023 1:12:00 AM	R97604
Xylenes, Total	ND	2.0		µg/L	1	6/22/2023 1:12:00 AM	R97604
Surr: 4-Bromofluorobenzene	93.3	52.4-148		%Rec	1	6/22/2023 1:12:00 AM	R97604

Lab ID: 2306949-009 **Collection Date:** 6/16/2023 11:45:00 AM
Client Sample ID: MW-18 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	1500	20		µg/L	20	6/22/2023 1:34:00 AM	R97604
Toluene	ND	20		µg/L	20	6/22/2023 1:34:00 AM	R97604
Ethylbenzene	52	20		µg/L	20	6/22/2023 1:34:00 AM	R97604
Xylenes, Total	ND	40		µg/L	20	6/22/2023 1:34:00 AM	R97604
Surr: 4-Bromofluorobenzene	93.2	52.4-148		%Rec	20	6/22/2023 1:34:00 AM	R97604

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.

Analytical Report
Lab Order: **2306949**
Date Reported: **6/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2306949
Project: Standard 1

Lab ID: 2306949-010 **Collection Date:** 6/16/2023 1:45:00 PM
Client Sample ID: MW-19 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	10000	200		µg/L	200	6/22/2023 1:56:00 AM	R97604
Toluene	14000	200		µg/L	200	6/22/2023 1:56:00 AM	R97604
Ethylbenzene	1200	200		µg/L	200	6/22/2023 1:56:00 AM	R97604
Xylenes, Total	7200	400		µg/L	200	6/22/2023 1:56:00 AM	R97604
Surr: 4-Bromofluorobenzene	95.5	52.4-148		%Rec	200	6/22/2023 1:56:00 AM	R97604

Lab ID: 2306949-011 **Collection Date:** 6/16/2023 11:10:00 AM
Client Sample ID: MW-22 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	2.0		µg/L	2	6/22/2023 2:40:00 AM	R97604
Toluene	ND	2.0		µg/L	2	6/22/2023 2:40:00 AM	R97604
Ethylbenzene	ND	2.0		µg/L	2	6/22/2023 2:40:00 AM	R97604
Xylenes, Total	ND	4.0		µg/L	2	6/22/2023 2:40:00 AM	R97604
Surr: 4-Bromofluorobenzene	94.6	52.4-148		%Rec	2	6/22/2023 2:40:00 AM	R97604

Lab ID: 2306949-012 **Collection Date:** 6/16/2023 1:10:00 PM
Client Sample ID: MW-23 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	2.0		µg/L	2	6/22/2023 3:02:00 AM	R97604
Toluene	ND	2.0		µg/L	2	6/22/2023 3:02:00 AM	R97604
Ethylbenzene	ND	2.0		µg/L	2	6/22/2023 3:02:00 AM	R97604
Xylenes, Total	ND	4.0		µg/L	2	6/22/2023 3:02:00 AM	R97604
Surr: 4-Bromofluorobenzene	92.4	52.4-148		%Rec	2	6/22/2023 3:02:00 AM	R97604

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 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

Analytical Report
Lab Order: **2306949**
Date Reported: **6/26/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2306949
Project: Standard 1

Lab ID: 2306949-013 **Collection Date:** 6/16/2023 1:00:00 PM
Client Sample ID: MW-26 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**	
Benzene	ND	1.0		µg/L	1	6/22/2023 3:23:00 AM	R97604
Toluene	ND	1.0		µg/L	1	6/22/2023 3:23:00 AM	R97604
Ethylbenzene	ND	1.0		µg/L	1	6/22/2023 3:23:00 AM	R97604
Xylenes, Total	ND	2.0		µg/L	1	6/22/2023 3:23:00 AM	R97604
Surr: 4-Bromofluorobenzene	91.5	52.4-148		%Rec	1	6/22/2023 3:23:00 AM	R97604

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#: **2306949**

26-Jun-23

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **2306949-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **MW-8**	Batch ID: **R97604**	RunNo: **97604**							
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550128**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.6	70	130			
Toluene	19	1.0	20.00	0	94.9	70	130			
Ethylbenzene	19	1.0	20.00	0	95.8	70	130			
Xylenes, Total	58	2.0	60.00	0	96.3	70	130			
Surr: 4-Bromofluorobenzene	20		20.00		102	52.4	148			

Sample ID: **2306949-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **MW-8**	Batch ID: **R97604**	RunNo: **97604**							
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550129**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.2	70	130	7.13	20	
Toluene	18	1.0	20.00	0	88.5	70	130	6.94	20	
Ethylbenzene	18	1.0	20.00	0	90.5	70	130	5.64	20	
Xylenes, Total	55	2.0	60.00	0	91.0	70	130	5.63	20	
Surr: 4-Bromofluorobenzene	20		20.00		97.7	52.4	148	0	0	

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSW**	Batch ID: **R97604**	RunNo: **97604**							
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550141**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	87.8	70	130			
Toluene	18	1.0	20.00	0	90.2	70	130			
Ethylbenzene	18	1.0	20.00	0	91.2	70	130			
Xylenes, Total	55	2.0	60.00	0	91.3	70	130			
Surr: 4-Bromofluorobenzene	20		20.00		98.2	52.4	148			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBW**	Batch ID: **R97604**	RunNo: **97604**							
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550142**	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	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		99.2	52.4	148			

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#: **2306949**

26-Jun-23

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R97645**	RunNo: **97645**
Prep Date:	Analysis Date: **6/22/2023**	SeqNo: **3551414** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	80.9	70	130			
Toluene	17	1.0	20.00	0	83.8	70	130			
Ethylbenzene	17	1.0	20.00	0	85.4	70	130			
Xylenes, Total	52	2.0	60.00	0	86.2	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		105	52.4	148			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R97645**	RunNo: **97645**
Prep Date:	Analysis Date: **6/22/2023**	SeqNo: **3551415** 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	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		107	52.4	148			

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: 2306949 | RcptNo: 1

Received By: Tracy Casarrubias 6/17/2023 7:50:00 AM

Completed By: Tracy Casarrubias 6/17/2023 11:34:44 AM

Reviewed By: JA 6-19-23

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: JA 6/19/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: Mailing address and phone number are missing on COC- TMC 6/17/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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:
☑ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (Including CF): 2.6-0.1=2.5 (°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. 2306949	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)
6-16	1130	Aq	MW-3	3 x 40mL VOA	HCl	001	✓									
	1220		MW-8			002										
	1410		MW-9			003										
	1040		MW-11			004										
	955		MW-12			005										
	1004		MW-15			006										
	1430		MW-16			007										
	1330		MW-17			008										
	1145		MW-18			009										
	1345		MW-19			010										
	1110		MW-22			011										
	1310		MW-23			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6-16	1546				6/16/23	1546
6/16/23	1806			courier	6/17/23	7:50

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.

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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:
☑ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No ypgi

# of Coolers: 1

Cooler Temp(Including CF): 2.6-0.1=2.5 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
6-16	1300	Aq	MW-26	3x 40mL VOA	HCl	2306949 013

Analysis Request

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)						
✓															

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6-16	1546				6/16/23	1546
6/16/23	1806			Courier	6/17/23	7:50

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

September 21, 2023

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

RE: Standard 1 OrderNo.: 2309934

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 13 sample(s) on 9/16/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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 **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-3
Project: Standard 1
Collection Date: 9/15/2023 12:45:00 PM
Lab ID: 2309934-001 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	18000	200		µg/L	200	9/19/2023 1:43:13 AM
Toluene	1000	200		µg/L	200	9/19/2023 1:43:13 AM
Ethylbenzene	650	200		µg/L	200	9/19/2023 1:43:13 AM
Xylenes, Total	5800	400		µg/L	200	9/19/2023 1:43:13 AM
Surr: 4-Bromofluorobenzene	105	52.4-148		%Rec	200	9/19/2023 1:43:13 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-8
Project: Standard 1
Collection Date: 9/14/2023 12:15:00 PM
Lab ID: 2309934-002 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 2:06:42 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 2:06:42 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 2:06:42 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 2:06:42 AM
Surr: 4-Bromofluorobenzene	103	52.4-148		%Rec	1	9/19/2023 2:06:42 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-9
Project: Standard 1
Collection Date: 9/15/2023 11:50:00 AM
Lab ID: 2309934-003 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	1100	20		µg/L	20	9/19/2023 10:53:19 AM
Toluene	3.6	1.0		µg/L	1	9/19/2023 2:30:21 AM
Ethylbenzene	78	1.0		µg/L	1	9/19/2023 2:30:21 AM
Xylenes, Total	1400	40		µg/L	20	9/19/2023 10:53:19 AM
Surr: 4-Bromofluorobenzene	104	52.4-148		%Rec	20	9/19/2023 10:53:19 AM
Surr: 4-Bromofluorobenzene	106	52.4-148		%Rec	1	9/19/2023 2:30:21 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-11
Project: Standard 1
Collection Date: 9/14/2023 10:50:00 AM
Lab ID: 2309934-004 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 2:53:55 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 2:53:55 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 2:53:55 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 2:53:55 AM
Surr: 4-Bromofluorobenzene	99.0	52.4-148		%Rec	1	9/19/2023 2:53:55 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-12
Project: Standard 1
Collection Date: 9/14/2023 10:25:00 AM
Lab ID: 2309934-005 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	48	1.0		µg/L	1	9/19/2023 3:17:32 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 3:17:32 AM
Ethylbenzene	5.6	1.0		µg/L	1	9/19/2023 3:17:32 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 3:17:32 AM
Surr: 4-Bromofluorobenzene	114	52.4-148		%Rec	1	9/19/2023 3:17:32 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-15
Project: Standard 1
Collection Date: 9/14/2023 1:05:00 PM
Lab ID: 2309934-006 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	29000	500		µg/L	500	9/19/2023 3:41:10 AM
Toluene	10000	500		µg/L	500	9/19/2023 3:41:10 AM
Ethylbenzene	590	500		µg/L	500	9/19/2023 3:41:10 AM
Xylenes, Total	4300	1000		µg/L	500	9/19/2023 3:41:10 AM
Surr: 4-Bromofluorobenzene	104	52.4-148		%Rec	500	9/19/2023 3:41:10 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-16
Project: Standard 1
Collection Date: 9/14/2023 1:25:00 PM
Lab ID: 2309934-007 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	130	50		µg/L	50	9/19/2023 4:51:44 AM
Toluene	ND	50		µg/L	50	9/19/2023 4:51:44 AM
Ethylbenzene	410	50		µg/L	50	9/19/2023 4:51:44 AM
Xylenes, Total	1200	100		µg/L	50	9/19/2023 4:51:44 AM
Surr: 4-Bromofluorobenzene	107	52.4-148		%Rec	50	9/19/2023 4:51:44 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-17
Project: Standard 1 **Collection Date:** 9/14/2023 2:15:00 PM
Lab ID: 2309934-008 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 5:15:12 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 5:15:12 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 5:15:12 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 5:15:12 AM
Surr: 4-Bromofluorobenzene	104	52.4-148		%Rec	1	9/19/2023 5:15:12 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-18
Project: Standard 1
Collection Date: 9/14/2023 11:45:00 AM
Lab ID: 2309934-009 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	5900	100		µg/L	100	9/19/2023 12:03:52 PM
Toluene	ND	50		µg/L	50	9/19/2023 4:28:16 AM
Ethylbenzene	280	50		µg/L	50	9/19/2023 4:28:16 AM
Xylenes, Total	ND	100		µg/L	50	9/19/2023 4:28:16 AM
Surr: 4-Bromofluorobenzene	106	52.4-148		%Rec	50	9/19/2023 4:28:16 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-19
Project: Standard 1
Collection Date: 9/14/2023 2:50:00 PM
Lab ID: 2309934-010 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	9700	200		µg/L	200	9/19/2023 4:04:43 AM
Toluene	15000	200		µg/L	200	9/19/2023 4:04:43 AM
Ethylbenzene	1200	200		µg/L	200	9/19/2023 4:04:43 AM
Xylenes, Total	8200	400		µg/L	200	9/19/2023 4:04:43 AM
Surr: 4-Bromofluorobenzene	105	52.4-148		%Rec	200	9/19/2023 4:04:43 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Client Sample ID:** MW-22
Project: Standard 1 **Collection Date:** 9/14/2023 11:15:00 AM
Lab ID: 2309934-011 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 6:02:10 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 6:02:10 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 6:02:10 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 6:02:10 AM
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	1	9/19/2023 6:02:10 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-23
Project: Standard 1
Collection Date: 9/15/2023 2:30:00 PM
Lab ID: 2309934-012 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 6:25:40 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 6:25:40 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 6:25:40 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 6:25:40 AM
Surr: 4-Bromofluorobenzene	98.6	52.4-148		%Rec	1	9/19/2023 6:25:40 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	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.		

Analytical Report
Lab Order **2309934**
Date Reported: **9/21/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: MW-26
Project: Standard 1
Collection Date: 9/14/2023 12:55:00 PM
Lab ID: 2309934-013 **Matrix:** AQUEOUS **Received Date:** 9/16/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	1.0		µg/L	1	9/19/2023 6:49:04 AM
Toluene	ND	1.0		µg/L	1	9/19/2023 6:49:04 AM
Ethylbenzene	ND	1.0		µg/L	1	9/19/2023 6:49:04 AM
Xylenes, Total	ND	2.0		µg/L	1	9/19/2023 6:49:04 AM
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	1	9/19/2023 6:49:04 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	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#: **2309934**

21-Sep-23

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **BW99776**	RunNo: **99776**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647541** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	99.9	70	130			
Ethylbenzene	20	1.0	20.00	0	99.7	70	130			
Xylenes, Total	61	2.0	60.00	0	101	70	130			
Surr: 4-Bromofluorobenzene	20		20.00		102	52.4	148			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **BW99776**	RunNo: **99776**
Prep Date:	Analysis Date: **9/18/2023**	SeqNo: **3647548** 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	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		103	52.4	148			

Sample ID: **2309934-013ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-26**	Batch ID: **BW99776**	RunNo: **99776**
Prep Date:	Analysis Date: **9/19/2023**	SeqNo: **3647562** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Ethylbenzene	20	1.0	20.00	0	101	70	130			
Xylenes, Total	61	2.0	60.00	0	102	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		107	52.4	148			

Sample ID: **2309934-013amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-26**	Batch ID: **BW99776**	RunNo: **99776**
Prep Date:	Analysis Date: **9/19/2023**	SeqNo: **3647563** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.4	70	130	3.93	20	
Toluene	19	1.0	20.00	0	97.3	70	130	3.98	20	
Ethylbenzene	20	1.0	20.00	0	98.3	70	130	2.23	20	
Xylenes, Total	59	2.0	60.00	0	99.0	70	130	2.61	20	
Surr: 4-Bromofluorobenzene	21		20.00		107	52.4	148	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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

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: 2309934 RcptNo: 1

Received By: Juan Rojas 9/16/2023 7:00:00 AM

Completed By: Desiree Dominguez 9/18/2023 10:14:33 AM

Reviewed By: 9/18/23

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: SCM 9/18/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Client did not provide address or phone number on COC. -DAD 9/18/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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:
☑ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Yogi

Cooler Temp (Including CF): 0.5-0.1=0.4 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309934	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)
9-15	1245	Aq	MW-3	3 40mL VOA	HCl	-001	✓									
9-14	1215		MW-8			-002										
9-15	1150		MW-9			-003										
9-14	1050		MW-11			-004										
9-14	1025		MW-12			-005										
9-14	1305		MW-15			-006										
9-14	1325		MW-16			-007										
9-14	1415		MW-17			-008										
9-14	1145		MW-18			-009										
9-14	1450		MW-19			-010										
9-14	1115		MW-22			-011										
9-15	1430		MW-23			-012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9-15	1612				9/15/23	1612
9/15/23	1754			courier	9/16/23	7:00

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.

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

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:
☑ Standard ☐ Rush

Project Name: Standard 1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Yoga

Cooler Temp(including CF): 0.5+0.1=0.4 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309934
9-14	1255	Aq	MW-36	3x40mL VOA	HCl	-013

Analysis Request

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)
✓									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9-15	1612				9/15/23	1612
9/15/23	1754			courier	9/16/23	7:00

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.

eurofins | Environment Testing

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

January 03, 2024

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

RE: Standard 1 OrderNo.: 2312989

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 11 sample(s) on 12/16/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **2312989**
Date Reported: **1/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2312989
Project: Standard 1

Lab ID: 2312989-001 **Collection Date:** 12/14/2023 1:15:00 PM
Client Sample ID: MW-8 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/22/2023 7:13:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 7:13:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/22/2023 7:13:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 7:13:00 PM	BW102
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	1	12/22/2023 7:13:00 PM	BW102

Lab ID: 2312989-002 **Collection Date:** 12/15/2023 1:40:00 PM
Client Sample ID: MW-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	1100	100		µg/L	100	12/24/2023 4:50:00 PM	BW102
Toluene	ND	10		µg/L	10	12/24/2023 5:12:00 PM	BW102
Ethylbenzene	96	10		µg/L	10	12/24/2023 5:12:00 PM	BW102
Xylenes, Total	290	20		µg/L	10	12/24/2023 5:12:00 PM	BW102
Surr: 4-Bromofluorobenzene	104	52.4-148		%Rec	10	12/24/2023 5:12:00 PM	BW102

Lab ID: 2312989-003 **Collection Date:** 12/14/2023 11:40:00 AM
Client Sample ID: MW-11 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/22/2023 8:18:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 8:18:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/22/2023 8:18:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 8:18:00 PM	BW102
Surr: 4-Bromofluorobenzene	101	52.4-148		%Rec	1	12/22/2023 8:18:00 PM	BW102

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 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

Analytical Report
Lab Order: **2312989**
Date Reported: **1/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2312989
Project: Standard 1

Lab ID: 2312989-004 **Collection Date:** 12/14/2023 11:00:00 AM
Client Sample ID: MW-12 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	5.3	1.0		µg/L	1	12/22/2023 8:40:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 8:40:00 PM	BW102
Ethylbenzene	1.1	1.0		µg/L	1	12/22/2023 8:40:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 8:40:00 PM	BW102
Surr: 4-Bromofluorobenzene	109	52.4-148		%Rec	1	12/22/2023 8:40:00 PM	BW102

Lab ID: 2312989-005 **Collection Date:** 12/15/2023 12:25:00 PM
Client Sample ID: MW-16 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	89	20		µg/L	20	12/24/2023 5:34:00 PM	BW102
Toluene	ND	20		µg/L	20	12/24/2023 5:34:00 PM	BW102
Ethylbenzene	380	20		µg/L	20	12/24/2023 5:34:00 PM	BW102
Xylenes, Total	490	40		µg/L	20	12/24/2023 5:34:00 PM	BW102
Surr: 4-Bromofluorobenzene	116	52.4-148		%Rec	20	12/24/2023 5:34:00 PM	BW102

Lab ID: 2312989-006 **Collection Date:** 12/15/2023 11:30:00 AM
Client Sample ID: MW-17 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/24/2023 5:55:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/24/2023 5:55:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/24/2023 5:55:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/24/2023 5:55:00 PM	BW102
Surr: 4-Bromofluorobenzene	101	52.4-148		%Rec	1	12/24/2023 5:55:00 PM	BW102

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.

Analytical Report
Lab Order: **2312989**
Date Reported: **1/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2312989
Project: Standard 1

Lab ID: 2312989-007 **Collection Date:** 12/14/2023 12:45:00 PM
Client Sample ID: MW-18 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	5500	200		µg/L	200	12/24/2023 6:17:00 PM	BW102
Toluene	ND	20		µg/L	20	12/24/2023 6:39:00 PM	BW102
Ethylbenzene	330	20		µg/L	20	12/24/2023 6:39:00 PM	BW102
Xylenes, Total	ND	40		µg/L	20	12/24/2023 6:39:00 PM	BW102
Surr: 4-Bromofluorobenzene	112	52.4-148		%Rec	20	12/24/2023 6:39:00 PM	BW102

Lab ID: 2312989-008 **Collection Date:** 12/15/2023 1:05:00 PM
Client Sample ID: MW-19 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	7700	200		µg/L	200	12/24/2023 7:01:00 PM	BW102
Toluene	14000	200		µg/L	200	12/24/2023 7:01:00 PM	BW102
Ethylbenzene	1300	200		µg/L	200	12/24/2023 7:01:00 PM	BW102
Xylenes, Total	8100	400		µg/L	200	12/24/2023 7:01:00 PM	BW102
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	200	12/24/2023 7:01:00 PM	BW102

Lab ID: 2312989-009 **Collection Date:** 12/14/2023 12:15:00 PM
Client Sample ID: MW-22 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/22/2023 9:02:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 9:02:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/22/2023 9:02:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 9:02:00 PM	BW102
Surr: 4-Bromofluorobenzene	101	52.4-148		%Rec	1	12/22/2023 9:02:00 PM	BW102

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 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

Analytical Report
Lab Order: **2312989**
Date Reported: **1/3/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY **Lab Order:** 2312989
Project: Standard 1

Lab ID: 2312989-010 **Collection Date:** 12/14/2023 2:55:00 PM
Client Sample ID: MW-23 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/22/2023 9:24:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 9:24:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/22/2023 9:24:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 9:24:00 PM	BW102
Surr: 4-Bromofluorobenzene	100	52.4-148		%Rec	1	12/22/2023 9:24:00 PM	BW102

Lab ID: 2312989-011 **Collection Date:** 12/14/2023 2:05:00 PM
Client Sample ID: MW-26 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/22/2023 9:46:00 PM	BW102
Toluene	ND	1.0		µg/L	1	12/22/2023 9:46:00 PM	BW102
Ethylbenzene	ND	1.0		µg/L	1	12/22/2023 9:46:00 PM	BW102
Xylenes, Total	ND	2.0		µg/L	1	12/22/2023 9:46:00 PM	BW102
Surr: 4-Bromofluorobenzene	102	52.4-148		%Rec	1	12/22/2023 9:46:00 PM	BW102

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 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#: **2312989**

03-Jan-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **BW102049**	RunNo: **102049**
Prep Date:	Analysis Date: **12/22/2023**	SeqNo: **3766006** 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	21	1.0	20.00	0	103	70	130			
Ethylbenzene	21	1.0	20.00	0	106	70	130			
Xylenes, Total	64	2.0	60.00	0	107	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		104	52.4	148			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **BW102049**	RunNo: **102049**
Prep Date:	Analysis Date: **12/22/2023**	SeqNo: **3766007** 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	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		101	52.4	148			

Sample ID: **2312989-001ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-8**	Batch ID: **BW102049**	RunNo: **102049**
Prep Date:	Analysis Date: **12/22/2023**	SeqNo: **3768238** 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	21	1.0	20.00	0	103	70	130			
Ethylbenzene	21	1.0	20.00	0.3680	102	70	130			
Xylenes, Total	62	2.0	60.00	0	104	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		103	52.4	148			

Sample ID: **2312989-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW-8**	Batch ID: **BW102049**	RunNo: **102049**
Prep Date:	Analysis Date: **12/22/2023**	SeqNo: **3768239** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.9	70	130	2.02	20	
Toluene	20	1.0	20.00	0	100	70	130	2.19	20	
Ethylbenzene	20	1.0	20.00	0.3680	99.8	70	130	2.06	20	
Xylenes, Total	61	2.0	60.00	0	102	70	130	2.01	20	
Surr: 4-Bromofluorobenzene	20		20.00		100	52.4	148	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2312989**

03-Jan-24

Client: HILCORP ENERGY

Project: Standard 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **BW102094**	RunNo: **102094**
Prep Date:	Analysis Date: **12/24/2023**	SeqNo: **3768318** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.5	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Ethylbenzene	20	1.0	20.00	0	102	70	130			
Xylenes, Total	62	2.0	60.00	0	103	70	130			
Surr: 4-Bromofluorobenzene	21		20.00		105	52.4	148			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **BW102094**	RunNo: **102094**
Prep Date:	Analysis Date: **12/24/2023**	SeqNo: **3768319** 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	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		103	52.4	148			

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

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Eurofins Environment Testing South Central, LLC
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: 2312989 RcptNo: 1

Received By: **Tracy Casarrubias** 12/16/2023 7:35:00 AM

Completed By: **Tracy Casarrubias** 12/16/2023 9:05:59 AM

Reviewed By: JM 12/18/23

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: 12/18/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	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)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Standard #1

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No morty

# of Coolers: 1

Cooler Temp(including CF): 1.9 ± 0 = 1.9 c

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2312989	BTEX 8021	Analysis Request
~~—~~	~~—~~	~~H2O~~	~~MW-3~~	(3) 40ml VOA	HCL/Cool		~~X~~	cw
12-14	1315	H2O	MW-8	(3) 40ml VOA	HCL/Cool	001	X	
12-15	1340	H2O	MW-9	(3) 40ml VOA	HCL/Cool	002	X	
12-14	1140	H2O	MW-11	(3) 40ml VOA	HCL/Cool	003	X	
12-14	1100	H2O	MW-12	(3) 40ml VOA	HCL/Cool	004	X	
~~—~~	~~—~~	~~H2O~~	~~MW-15~~	~~(3) 40ml VOA~~	~~HCL/Cool~~		~~X~~	cw
12-15	1225	H2O	MW-16	(3) 40ml VOA	HCL/Cool	005	X	
12-15	1130	H2O	MW-17	(3) 40ml VOA	HCL/Cool	006	X	
12-14	1245	H2O	MW-18	(3) 40ml VOA	HCL/Cool	007	X	
12-15	1305	H2O	MW-19	(3) 40ml VOA	HCL/Cool	008	X	
12-14	1215	H2O	MW-22	(3) 40ml VOA	HCL/Cool	009	X	
12-14	1455	H2O	MW-23	(3) 40ml VOA	HCL/Cool	010	X	
12-14	1405	H2O	MW-26	(3) 40ml VOA	HCL/Cool	011	X	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/15/23	1551		Chris Walls		12/15/23	1551
12/15/23	1742			Courier	12/16/23	7:35

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.

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/10/2024 5:35:58 PM

JOB DESCRIPTION

Standard #1

JOB NUMBER

885-2070-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

my EOL

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

Generated
4/10/2024 5:35:58 PM

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

Client: Hilcorp Energy
Project/Site: Standard #1

Laboratory Job ID: 885-2070-1

Table of Contents

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
P2	The sample was received with pH>2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: Standard #1

Job ID: 885-2070-1

Job ID: 885-2070-1 Eurofins Albuquerque

Job Narrative
885-2070-1

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 3/30/2024 8:30 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 3.0°C.

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

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-3

Date Collected: 03/27/24 13:15
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-1

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9200**		200		ug/L			04/05/24 18:10	200
Ethylbenzene	ND		200		ug/L			04/05/24 18:10	200
Toluene	**5500**		200		ug/L			04/05/24 18:10	200
Xylenes, Total	**4300**		300		ug/L			04/05/24 18:10	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*04/05/24 18:10*	*200*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 18:10*	*200*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*04/05/24 18:10*	*200*
Toluene-d8 (Surr)	*95*		*70 - 130*		*04/05/24 18:10*	*200*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-8

Date Collected: 03/27/24 16:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 20:29	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 20:29	1
Toluene	ND		1.0		ug/L			04/04/24 20:29	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*04/04/24 20:29*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*04/04/24 20:29*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*04/04/24 20:29*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*04/04/24 20:29*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-9

Date Collected: 03/28/24 11:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-3

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1000**		100		ug/L			04/05/24 18:35	100
Ethylbenzene	**87**		10		ug/L			04/05/24 18:59	10
Toluene	ND		10		ug/L			04/05/24 18:59	10
Xylenes, Total	ND		15		ug/L			04/05/24 18:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*04/05/24 18:35*	*100*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*04/05/24 18:59*	*10*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*04/05/24 18:59*	*10*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*04/05/24 18:35*	*100*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*04/05/24 18:59*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*		*04/05/24 18:59*	*10*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-11

Date Collected: 03/28/24 13:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-4

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 20:54	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 20:54	1
Toluene	ND		1.0		ug/L			04/04/24 20:54	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*04/04/24 20:54*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*04/04/24 20:54*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*04/04/24 20:54*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*04/04/24 20:54*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-12
Date Collected: 03/28/24 13:20
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-5
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**36**		1.0		ug/L			04/04/24 21:18	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 21:18	1
Toluene	ND		1.0		ug/L			04/04/24 21:18	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*04/04/24 21:18*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*04/04/24 21:18*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*04/04/24 21:18*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*04/04/24 21:18*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-15
Date Collected: 03/27/24 13:55
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-6
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**14000**		500		ug/L			04/05/24 19:24	500
Ethylbenzene	ND		500		ug/L			04/05/24 19:24	500
Toluene	**1000**		500		ug/L			04/05/24 19:24	500
Xylenes, Total	**1800**		750		ug/L			04/05/24 19:24	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*04/05/24 19:24*	*500*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 19:24*	*500*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*04/05/24 19:24*	*500*
Toluene-d8 (Surr)	*98*		*70 - 130*		*04/05/24 19:24*	*500*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-16
Date Collected: 03/28/24 12:50
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-7
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**77**		20		ug/L			04/05/24 19:48	20
Ethylbenzene	**340**		20		ug/L			04/05/24 19:48	20
Toluene	ND		20		ug/L			04/05/24 19:48	20
Xylenes, Total	**310**		30		ug/L			04/05/24 19:48	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*04/05/24 19:48*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*04/05/24 19:48*	*20*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/05/24 19:48*	*20*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/05/24 19:48*	*20*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-17
Date Collected: 03/28/24 12:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-8
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 21:43	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 21:43	1
Toluene	ND		1.0		ug/L			04/04/24 21:43	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*04/04/24 21:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*04/04/24 21:43*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/04/24 21:43*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*04/04/24 21:43*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-18

Date Collected: 03/27/24 17:55
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-9

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**67**		20		ug/L			04/05/24 20:37	20
Ethylbenzene	**150**		20		ug/L			04/05/24 20:37	20
Toluene	ND		20		ug/L			04/05/24 20:37	20
Xylenes, Total	ND		30		ug/L			04/05/24 20:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*04/05/24 20:37*	*20*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 20:37*	*20*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*04/05/24 20:37*	*20*
Toluene-d8 (Surr)	*96*		*70 - 130*		*04/05/24 20:37*	*20*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-19

Date Collected: 03/28/24 11:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-10

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6700**	**P2**	200		ug/L			04/05/24 21:01	200
Ethylbenzene	**1100**	**P2**	200		ug/L			04/05/24 21:01	200
Toluene	**17000**	**P2**	200		ug/L			04/05/24 21:01	200
Xylenes, Total	**9200**	**P2**	300		ug/L			04/05/24 21:01	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*	*P2*	*70 - 130*		*04/05/24 21:01*	*200*
4-Bromofluorobenzene (Surr)	*103*	*P2*	*70 - 130*		*04/05/24 21:01*	*200*
Dibromofluoromethane (Surr)	*97*	*P2*	*70 - 130*		*04/05/24 21:01*	*200*
Toluene-d8 (Surr)	*98*	*P2*	*70 - 130*		*04/05/24 21:01*	*200*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-22

Date Collected: 03/28/24 14:20
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-11

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 22:07	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 22:07	1
Toluene	ND		1.0		ug/L			04/04/24 22:07	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*04/04/24 22:07*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*04/04/24 22:07*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/04/24 22:07*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*04/04/24 22:07*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-23

Date Collected: 03/27/24 16:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-12

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 22:32	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 22:32	1
Toluene	ND		1.0		ug/L			04/04/24 22:32	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*04/04/24 22:32*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*04/04/24 22:32*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*04/04/24 22:32*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*04/04/24 22:32*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-26

Date Collected: 03/27/24 17:15
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-13

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/05/24 16:57	1
Ethylbenzene	ND		1.0		ug/L			04/05/24 16:57	1
Toluene	ND		1.0		ug/L			04/05/24 16:57	1
Xylenes, Total	ND		1.5		ug/L			04/05/24 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*04/05/24 16:57*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*04/05/24 16:57*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/05/24 16:57*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*04/05/24 16:57*	*1*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-6

Date Collected: 03/27/24 14:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-14

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2900**		500		ug/L			04/05/24 21:26	500
Ethylbenzene	**590**		500		ug/L			04/05/24 21:26	500
Toluene	**3100**		500		ug/L			04/05/24 21:26	500
Xylenes, Total	**8700**		750		ug/L			04/05/24 21:26	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*04/05/24 21:26*	*500*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 21:26*	*500*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*04/05/24 21:26*	*500*
Toluene-d8 (Surr)	*98*		*70 - 130*		*04/05/24 21:26*	*500*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-1

Date Collected: 03/27/24 11:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-15

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**24000**		1000		ug/L			04/05/24 21:50	1000
Ethylbenzene	**1500**		100		ug/L			04/05/24 22:15	100
Toluene	**34000**		1000		ug/L			04/05/24 21:50	1000
Xylenes, Total	**17000**		150		ug/L			04/05/24 22:15	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*04/05/24 21:50*	*1000*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*04/05/24 22:15*	*100*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 22:15*	*100*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*04/05/24 21:50*	*1000*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*04/05/24 22:15*	*100*
Toluene-d8 (Surr)	*99*		*70 - 130*		*04/05/24 21:50*	*1000*
Toluene-d8 (Surr)	*107*		*70 - 130*		*04/05/24 22:15*	*100*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-2

Date Collected: 03/27/24 12:40
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-16

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	14000		200		ug/L			04/05/24 22:39	200
Ethylbenzene	330		200		ug/L			04/05/24 22:39	200
Toluene	3600		200		ug/L			04/05/24 22:39	200
Xylenes, Total	6800		300		ug/L			04/05/24 22:39	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*04/05/24 22:39*	*200*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/24 22:39*	*200*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*04/05/24 22:39*	*200*
Toluene-d8 (Surr)	*97*		*70 - 130*		*04/05/24 22:39*	*200*

Client Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-10

Date Collected: 03/27/24 10:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-17

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**13000**		500		ug/L			04/05/24 23:03	500
Ethylbenzene	**1400**		500		ug/L			04/05/24 23:03	500
Toluene	ND		500		ug/L			04/05/24 23:03	500
Xylenes, Total	**7800**		750		ug/L			04/05/24 23:03	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*04/05/24 23:03*	*500*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/24 23:03*	*500*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*04/05/24 23:03*	*500*
Toluene-d8 (Surr)	*99*		*70 - 130*		*04/05/24 23:03*	*500*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

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

Lab Sample ID: MB 885-2836/4
Matrix: Water
Analysis Batch: 2836

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/04/24 11:57	1
Ethylbenzene	ND		1.0		ug/L			04/04/24 11:57	1
Toluene	ND		1.0		ug/L			04/04/24 11:57	1
Xylenes, Total	ND		1.5		ug/L			04/04/24 11:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*04/04/24 11:57*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*04/04/24 11:57*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*04/04/24 11:57*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*04/04/24 11:57*	*1*

Lab Sample ID: LCS 885-2836/3
Matrix: Water
Analysis Batch: 2836

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.1	21.1		ug/L		105	70 - 130		
Toluene			20.2	21.4		ug/L		106	70 - 130		
Trichloroethene (TCE)			20.2	20.2		ug/L		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 885-2952/3
Matrix: Water
Analysis Batch: 2952

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			04/05/24 14:07	1
Ethylbenzene	ND		1.0		ug/L			04/05/24 14:07	1
Toluene	ND		1.0		ug/L			04/05/24 14:07	1
Xylenes, Total	ND		1.5		ug/L			04/05/24 14:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*04/05/24 14:07*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*04/05/24 14:07*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*04/05/24 14:07*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*04/05/24 14:07*	*1*

Lab Sample ID: LCS 885-2952/2
Matrix: Water
Analysis Batch: 2952

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.1	20.5		ug/L		102	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

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

Lab Sample ID: LCS 885-2952/2
Matrix: Water
Analysis Batch: 2952

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Toluene			20.2	20.7		ug/L		102	70 - 130		
Trichloroethene (TCE)			20.2	19.4		ug/L		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 885-2070-13 MS
Matrix: Water
Analysis Batch: 2952

Client Sample ID: MW-26
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		20.1	20.4		ug/L		101	70 - 130		
Toluene	ND		20.2	20.0		ug/L		99	70 - 130		
Trichloroethene (TCE)	ND		20.2	19.6		ug/L		97	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: 885-2070-13 MSD
Matrix: Water
Analysis Batch: 2952

Client Sample ID: MW-26
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		20.1	20.0		ug/L		99	70 - 130	2	20
Toluene	ND		20.2	19.7		ug/L		98	70 - 130	2	20
Trichloroethene (TCE)	ND		20.2	18.8		ug/L		93	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

QC Association Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

GC/MS VOA

Analysis Batch: 2836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2070-2	MW-8	Total/NA	Water	8260B	
885-2070-4	MW-11	Total/NA	Water	8260B	
885-2070-5	MW-12	Total/NA	Water	8260B	
885-2070-8	MW-17	Total/NA	Water	8260B	
885-2070-11	MW-22	Total/NA	Water	8260B	
885-2070-12	MW-23	Total/NA	Water	8260B	
MB 885-2836/4	Method Blank	Total/NA	Water	8260B	
LCS 885-2836/3	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 2952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2070-1	MW-3	Total/NA	Water	8260B	
885-2070-3	MW-9	Total/NA	Water	8260B	
885-2070-3	MW-9	Total/NA	Water	8260B	
885-2070-6	MW-15	Total/NA	Water	8260B	
885-2070-7	MW-16	Total/NA	Water	8260B	
885-2070-9	MW-18	Total/NA	Water	8260B	
885-2070-10	MW-19	Total/NA	Water	8260B	
885-2070-13	MW-26	Total/NA	Water	8260B	
885-2070-14	MW-6	Total/NA	Water	8260B	
885-2070-15	MW-1	Total/NA	Water	8260B	
885-2070-15	MW-1	Total/NA	Water	8260B	
885-2070-16	MW-2	Total/NA	Water	8260B	
885-2070-17	MW-10	Total/NA	Water	8260B	
MB 885-2952/3	Method Blank	Total/NA	Water	8260B	
LCS 885-2952/2	Lab Control Sample	Total/NA	Water	8260B	
885-2070-13 MS	MW-26	Total/NA	Water	8260B	
885-2070-13 MSD	MW-26	Total/NA	Water	8260B	

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-3
Date Collected: 03/27/24 13:15
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		200	2952	CM	EET ALB	04/05/24 18:10

Client Sample ID: MW-8
Date Collected: 03/27/24 16:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 20:29

Client Sample ID: MW-9
Date Collected: 03/28/24 11:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		100	2952	CM	EET ALB	04/05/24 18:35
Total/NA	Analysis	8260B		10	2952	CM	EET ALB	04/05/24 18:59

Client Sample ID: MW-11
Date Collected: 03/28/24 13:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 20:54

Client Sample ID: MW-12
Date Collected: 03/28/24 13:20
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 21:18

Client Sample ID: MW-15
Date Collected: 03/27/24 13:55
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		500	2952	CM	EET ALB	04/05/24 19:24

Client Sample ID: MW-16
Date Collected: 03/28/24 12:50
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		20	2952	CM	EET ALB	04/05/24 19:48

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-17
Date Collected: 03/28/24 12:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 21:43

Client Sample ID: MW-18
Date Collected: 03/27/24 17:55
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		20	2952	CM	EET ALB	04/05/24 20:37

Client Sample ID: MW-19
Date Collected: 03/28/24 11:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		200	2952	CM	EET ALB	04/05/24 21:01

Client Sample ID: MW-22
Date Collected: 03/28/24 14:20
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 22:07

Client Sample ID: MW-23
Date Collected: 03/27/24 16:00
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2836	CM	EET ALB	04/04/24 22:32

Client Sample ID: MW-26
Date Collected: 03/27/24 17:15
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2952	CM	EET ALB	04/05/24 16:57

Client Sample ID: MW-6
Date Collected: 03/27/24 14:30
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		500	2952	CM	EET ALB	04/05/24 21:26

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

Client Sample ID: MW-1
Date Collected: 03/27/24 11:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1000	2952	CM	EET ALB	04/05/24 21:50
Total/NA	Analysis	8260B		100	2952	CM	EET ALB	04/05/24 22:15

Client Sample ID: MW-2
Date Collected: 03/27/24 12:40
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		200	2952	CM	EET ALB	04/05/24 22:39

Client Sample ID: MW-10
Date Collected: 03/27/24 10:45
Date Received: 03/30/24 08:30

Lab Sample ID: 885-2070-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		500	2952	CM	EET ALB	04/05/24 23:03

Laboratory References:

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

Accreditation/Certification Summary

Client: Hilcorp Energy
Project/Site: Standard #1

Job ID: 885-2070-1

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

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.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	Benzene
8260B		Water	Ethylbenzene
8260B		Water	Toluene
8260B		Water	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

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:

Standard #1

Project #:

Project Manager:

Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☒ Yes ☐ No Yog:

# of Coolers: 1

Cooler Temp(including CF): 3.0-0=3.0

HALL ENVIRONMENTAL ANALYSIS LABORAT(

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

885-2070 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX 8260
3-27	1315	H2O	MW-3	(3) 40ml VOA	HCL/Cool	-1	X
3-27	1630	H2O	MW-8	(3) 40ml VOA	HCL/Cool	-2	X
3-28	1130	H2O	MW-9	(3) 40ml VOA	HCL/Cool	-3	X
3-28	1345	H2O	MW-11	(3) 40ml VOA	HCL/Cool	-4	X
3-28	1320	H2O	MW-12	(3) 40ml VOA	HCL/Cool	-5	X
3-27	1355	H2O	MW-15	(3) 40ml VOA	HCL/Cool	-6	X
3-28	1250	H2O	MW-16	(3) 40ml VOA	HCL/Cool	-7	X
3-28	1200	H2O	MW-17	(3) 40ml VOA	HCL/Cool	-8	X
3-27	1755	H2O	MW-18	(3) 40ml VOA	HCL/Cool	-9	X
3-28	1100	H2O	MW-19	(3) 40ml VOA	HCL/Cool	-10	X
3-28	1420	H2O	MW-22	(3) 40ml VOA	HCL/Cool	-11	X
3-27	1600	H2O	MW-23	(3) 40ml VOA	HCL/Cool	-12	X
3-27	1715	H2O	MW-26	(3) 40ml VOA	HCL/Cool	-13	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/28/24	1521				3/28/24	1521
3/28/24	1712			Courier	3/30/24	0830

Remarks: Special Pricing, See Andy.

cc: Shyde@ensolum.com

Pg 1 of 2

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.

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

FO

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Standard #1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No Yes

# of Coolers: 1

Cooler Temp(Including CF): 3.0-0=3.0 (°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.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	~~8260 (VOA)~~ ✓	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BTEX 8260 ✓
3-27	1430	H_2O	MW-6	(3) 40mL VOA	HCl/Cool	-14								✓			✓
3-27	1145	H_2O	MW-1			-15											
3-27	1240	H_2O	MW-2			-16											
3-27	1045	H_2O	MW-10			-17											

Date	Time.	Relinquished by:	Received by:	Via:	Date	Time
3/28/24	1521				3/28/24	1521
Date. 3/28/24	Time: 1712	Relinquished by:	Received by:	Via:	Date	Time
				Courier	3/30/24	0830

Remarks:

Pg 2 of 2

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.

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-2070-1

Login Number: 2070 **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.	True	
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	

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 337364

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 337364
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2024 First Quarter Remediation System Operation and Monitoring Report for Standard #1: Content Satisfactory 1. Continue as planned to conduct biweekly or bimonthly sampling events to ensure the DPE system is functioning normally. 2. Note any deviations as stated in report. 3. Submit next quarterly report to OCD 15 to 30 days after the end of each quarter.	6/3/2024