

1. Continue O&M & sampling as stated in report. 2. Submit next quarterly report by April 15, 2025.

January 14, 2025

New Mexico Oil Conservation Division

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

Re: Fourth Quarter 2024 – SVE System Update

San Juan 28-6 #31
Rio Arriba County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NVF1816655680

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Fourth Quarter 2024 – SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the San Juan 28-6 #31 natural gas production well (Site) located in Unit M, Section 28, Township 28 North, Range 6 West in Rio Arriba County, New Mexico (Figure 1). Specifically, this report summarizes Site activities performed in October, November, and December of 2024 to the New Mexico Oil Conservation Division (NMOCD).

SVE SYSTEM SPECIFICATIONS

The current SVE system consists of a three-phase, 3 horsepower (HP) Ametek Rotron Model EN656 regenerative blower capable of producing 100 standard cubic feet per minute (scfm) of flow and 50 inches of water column (IWC). In total, 19 SVE wells (SVE-1, SVE-2RS, SVE-2RD, SVE-3, SVE-4, SVE-5, SVE-6, SVE-7S, SVE-7D, SVE-8, SVE-9, SVE-10, SVE-11S, SVE-11D, SVE-12S, SVE-13S, SVE-13D, SVE-14S, and SVE-15) are installed at the Site at varying depth intervals in order to induce air flow through the impacted zones in the subsurface. Two additional deep zone SVE wells (SVE-12D and SVE-14D) were previously installed but are not currently connected to the SVE system. SVE well locations are presented on Figure 2. Additionally, the power for the SVE system was converted from generator to a permanent power drop on April 20, 2022. Specifically, the voltage capacity of the power drop at the Site was increased in order to run the SVE system and negate the need for a generator to power the system. This was determined to be necessary based on reliability issues with the generators used at the Site.

FOURTH QUARTER 2024 ACTIVITIES

During the fourth quarter of 2024, Ensolum and Hilcorp personnel performed bi-weekly operation and maintenance (O&M) visits to ensure the system was operating as designed and to perform any required maintenance. Field notes taken during O&M visits are presented in Appendix A. Between September 26 and December 30, 2024, the SVE system operated for an estimated 2,278 hours for a runtime efficiency of 99.9 percent (%). Table 1 presents the SVE system operational hours and percent runtime. Appendix B presents photographs of the runtime meter for calculating the fourth quarter runtime efficiency. During the fourth quarter of 2024, zones Leg A Deep, Leg A Shallow, and Leg B-1 were operating with 13 of the 19 wells operational.

A vapor sample for the fourth quarter 2024 was collected on November 27, 2024. The fourth quarter 2024 vapor sample was collected from the sample port located between the SVE piping manifold (collected from the total combined air flow from all active wells) and the SVE blower using a high vacuum air sampler. Prior to collection, the vapor sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The vapor sample was collected directly into two 1-Liter Tedlar® bags and submitted to Eurofins Environment Testing, located in Albuquerque, New Mexico, for analysis of total volatile petroleum hydrocarbons (TVPH, also referred to as total petroleum hydrocarbons – gasoline range organics (TPH-GRO)) following United States Environmental Protection Agency (EPA) Method 8015D, volatile organic compounds (VOCs) following EPA Method 8260B, and fixed gas analysis of oxygen and carbon dioxide following Gas Processor Association (GPA) Method 2261. Table 2 presents a summary of analytical data collected during this and previous sampling events, with the full laboratory analytical report included as Appendix C.

Vapor sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 3). Based on these estimates, a total of 25,289 pounds (13 tons) of TVPH have been removed by the system to date.

RECOMMENDATIONS

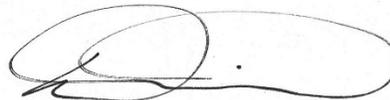
Bi-weekly O&M visits will continue to be performed by Ensolum and/or Hilcorp personnel to verify the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following quarterly report. Hilcorp will continue operating the SVE until asymptotic mass removal rates are observed. At that time, an evaluation of residual petroleum hydrocarbons will be assessed and further recommendations for remedial actions, if any, will be provided to NMOCD.

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



Stuart Hyde, LG (licensed in WA & TX)
 Senior Managing Geologist
 (970) 903-1607
 shyde@ensolum.com



Daniel R. Moir, PG (licensed in WY & TX)
 Senior Managing Geologist
 (303) 887-2946
 dmoir@ensolum.com

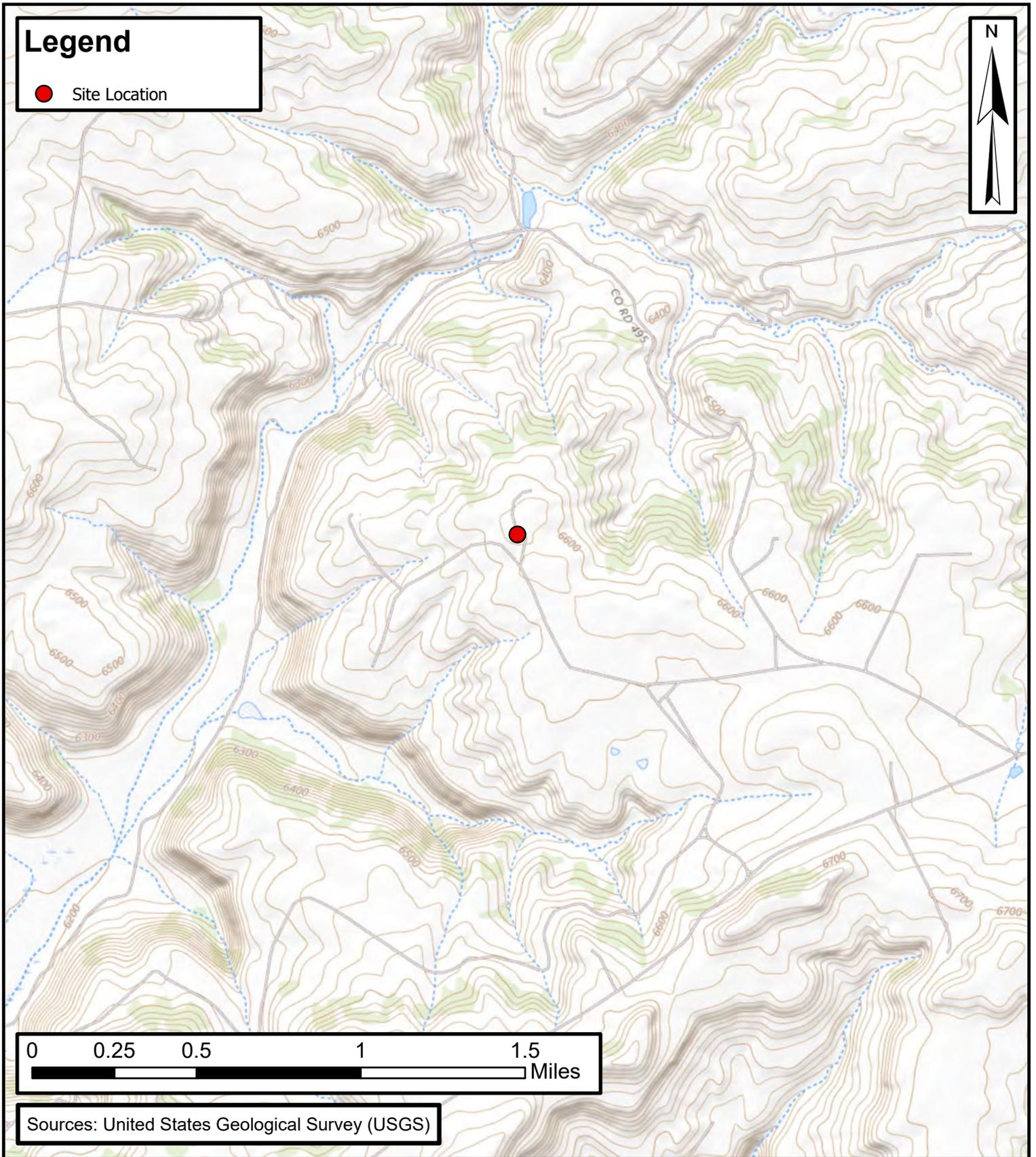
Attachments:

Figure 1	Site Location Map
Figure 2	SVE System Configuration
Table 1	Soil Vapor Extraction System Runtime Calculations
Table 2	Soil Vapor Extraction System Air Analytical Results
Table 3	Soil Vapor Extraction System Mass Removal and Emissions
Appendix A	Field Notes
Appendix B	Project Photographs
Appendix C	Laboratory Analytical Reports



Figures





Legend
● Site Location



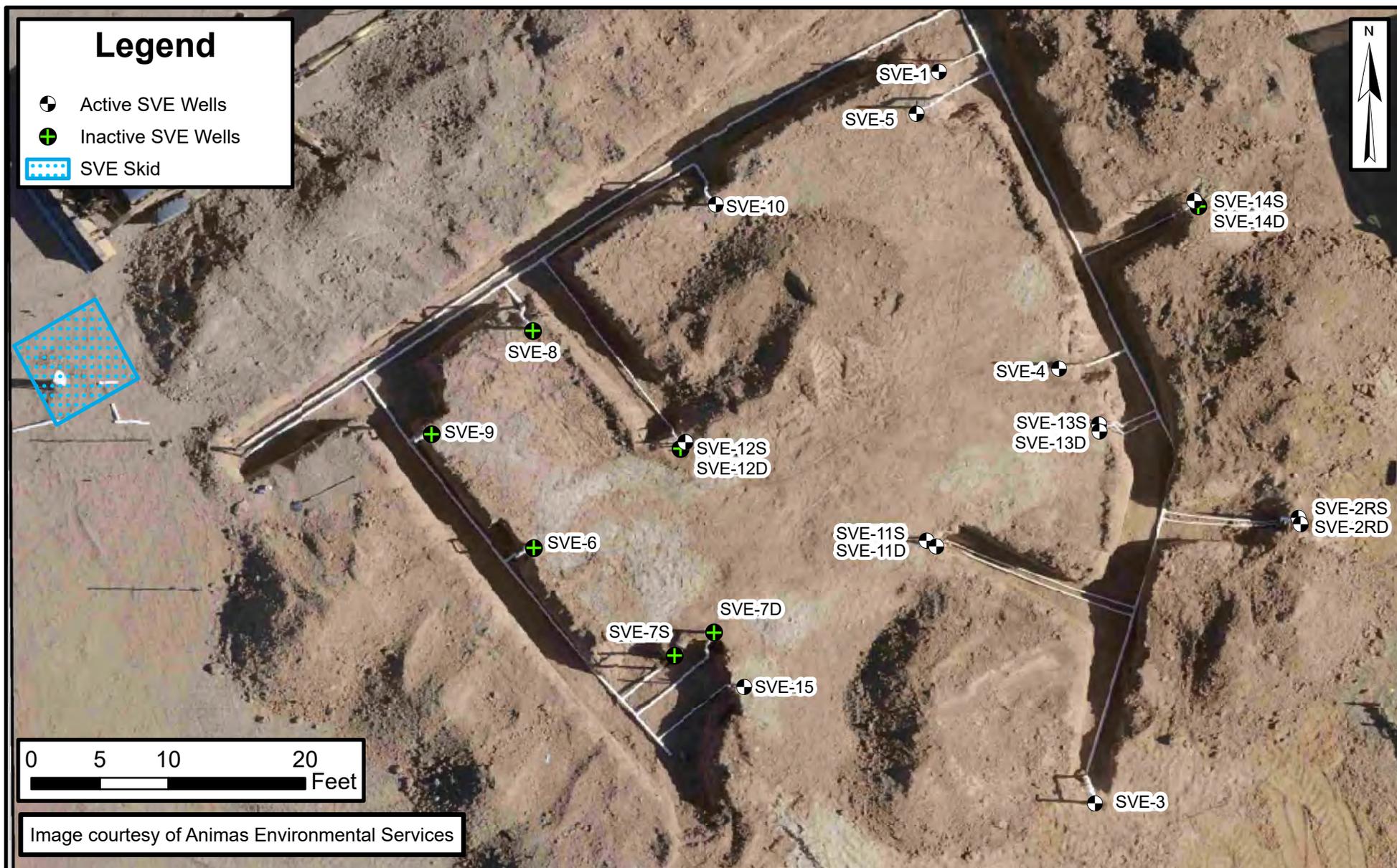
0 0.25 0.5 1 1.5 Miles

Sources: United States Geological Survey (USGS)

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

Site Location Map
San Juan 28-6 #31
Hilcorp Energy Company
36.6277°N, -107.4781°W
Rio Arriba County, NM

FIGURE
1



0 5 10 20
Feet

Image courtesy of Animas Environmental Services

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

SVE System Configuration

San Juan 28-6 #31
Hilcorp Energy Company
36.6277° N, -107.4781° W
Rio Arriba County, New Mexico

FIGURE
2



Tables





TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
San Juan 28-6 #31
Hilcorp Energy Company
Rio Arriba County, New Mexico

Date	SVE Runtime Hours	Delta Hours	Days	% Runtime
9/26/2024	669	--	--	--
12/30/2024	2,946	2,278	95	99.9%

TABLE 2
SOIL VAPOR EXTRACTION SYSTEM AIR ANALYTICAL RESULTS

San Juan 28-6 #31
Hilcorp Energy Company
Rio Arriba County, New Mexico

Date	Sample Identification	Operating SVE Zones	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
9/20/2021	Pilot Test	All Zones	1,287	720	1,600	15	320	250,000	17.87%	2.05%
9/28/2021	Influent A+B	All Zones	736	240	720	27	350	53,000	---	---
10/21/2021	Influent A+B	All Zones	615	60	170	6.7	74	13,000	---	---
11/5/2021	Leg A Deep	Leg A Deep	1,177	620	1,700	29	390	72,000	---	---
12/16/2021	Leg A Deep	Leg A Deep	1,398	470	950	11	190	96,000	21.00%	0.83%
12/16/2021	Leg A Shallow	Leg A Shallow	298	10	32	1.1	19	2,300	22.00%	0.12%
1/6/2022	Leg A Shallow	Leg A Shallow	283	12	34	1.2	15	2,500	22.13%	0.13%
1/6/2022	Leg B-1	Leg B-1	158	2.3	10	<0.50	6.7	1,100	21.97%	0.10%
3/24/2022	Influent All Wells	All Zones	604	48	92	1.2	19	6,300	22.10%	0.18%
6/13/2022	Influent All Wells	All Zones	414	30	89	<2.0	29	4,600	21.57%	0.25%
9/30/2022	Influent 9-30	All Zones	410	19	65	2.1	26	3,700	21.57%	0.28%
12/6/2022	SVE-1	All Zones	284	85	220	<5.0	58	22,000	21.69%	0.23%
3/8/2023	SVE-1	All Zones	381	13	54	<5.0	16	52	21.66%	0.19%
6/22/2023	SVE-1	All Zones	356	8.4	39	1.2	17	3,000	21.66%	0.20%
8/22/2023	SVE-1	All Zones	386	14	49	<5.0	17	2,800	21.68%	0.20%
11/22/2023	SVE-1	All Zones	396	14	56	<5.0	20	2,800	21.45%	0.19%
3/7/2024	SVE-1	All Zones	265	6.3	24	<5.0	8.6	1,300	21.93%	0.02%
6/15/2024	SVE-1	Leg A Shallow Leg A Deep Leg B-1	143	7.2	28	0.92	16	1,400	21.98%	0.20%
9/10/2024	SVE-1	Leg A Shallow Leg A Deep Leg B-1	263	57	220	5.2	97	1,200	21.69%	0.23%
11/27/2024	SVE-1	Leg A Shallow Leg A Deep Leg B-1	164	6.6	13	<5.0	<7.5	1,100	22.05%	0.18%

Notes:

GRO: gasoline range hydrocarbons

µg/L: microgram per liter

PID: photoionization detector

ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

%: percent

--: not sampled/analyzed

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



TABLE 3
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
 San Juan 28-6 #31
 Hilcorp Energy Company
 Rio Arriba County, New Mexico

Laboratory Analysis

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
9/28/2021	736	240	720	27	350	53,000
10/21/2021	615	60	170	6.7	74	13,000
11/5/2021	1,177	620	1,700	29	390	72,000
12/16/2021	298	10	32	1.1	19	2,300
1/6/2022	158	2.3	10	0.50	6.7	1,100
3/24/2022	604	48	92	1.2	19	6,300
6/13/2022	414	30	89	2.0	29	4,600
9/30/2022 ⁽¹⁾	410	19	65	2.1	26	3,700
12/6/2022	284	85	220	5.0	58	22,000
3/8/2023	381	13	54	5.0	16	52
6/22/2023	356	8.4	39	1.2	17	3,000
8/22/2023	386	14	49	5.0	17	2,800
11/22/2023	396	14	56	5.0	20	2,800
3/7/2024	265	6.3	24	5.0	8.6	1,300
6/15/2024	143	7.2	28	0.92	16	1,400
9/10/2024	263	57	220	5.2	97	1,200
11/27/2024	164	6.6	13	5.0	7.5	1,100
Average	415	73	211	6.3	69	11,274

Vapor Extraction Summary

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
9/28/2021	60	17,280	17,280	0.054	0.16	0.0061	0.079	12
10/21/2021	50	1,648,680	1,631,400	0.028	0.083	0.0032	0.040	6.2
11/5/2021	8	1,864,392	215,712	0.010	0.028	0.00053	0.0069	1.3
12/16/2021	12	2,496,696	632,304	0.014	0.039	0.00068	0.0092	1.7
1/6/2022	32	3,352,056	855,360	0.00072	0.0025	0.000096	0.0015	0.20
3/24/2022	12	4,610,688	1,258,632	0.0011	0.0023	0.000038	0.00058	0.17
6/13/2022	61	11,659,482	7,048,794	0.0089	0.021	0.00037	0.0055	1.2
9/19/2022 ⁽¹⁾	52	18,819,882	7,160,400	0.0048	0.015	0.00040	0.0053	0.81
12/6/2022	55	24,971,082	6,151,200	0.011	0.029	0.00073	0.0086	2.6
3/8/2023	50	31,583,082	6,612,000	0.0092	0.026	0.00094	0.0069	2.1
6/22/2023	55	39,941,982	8,358,900	0.0022	0.0096	0.00064	0.0034	0.31
8/22/2023	60	45,183,582	5,241,600	0.0025	0.0099	0.00070	0.0038	0.65
11/22/2023	60	53,117,982	7,934,400	0.0031	0.012	0.0011	0.0042	0.63
3/7/2024	55	61,486,782	8,368,800	0.0021	0.008	0.0010	0.0029	0.42
6/15/2024	55	68,403,582	6,916,800	0.0014	0.005	0.0006	0.0025	0.28
9/10/2024	55	75,323,682	6,920,100	0.0066	0.026	0.0006	0.0116	0.27
11/27/2024	50	80,925,582	5,601,900	0.0059	0.022	0.0010	0.0098	0.22
Average				0.010	0.029	0.001	0.012	1.8

Mass Recovery

Date	Total Operational Hours ⁽²⁾	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
9/28/2021	5	5	0.26	0.78	0.029	0.4	57	0.029
10/21/2021	549	544	15	45	1.7	21.6	3,356	1.7
11/9/2021 ⁽³⁾	998	449	4.6	13	0.24	3.1	571	0.29
12/16/2021	1,876	878	12	34	0.59	8.1	1,464	0.73
1/6/2022	2,322	446	0.32	1.1	0.043	0.7	91	0.045
3/24/2022	4,070	1,748	2.0	4.0	0.067	1.0	290	0.15
6/13/2022	5,996	1,926	17	40	0.70	11	2,395	1.2
9/19/2022 ⁽¹⁾	8,291	2,295	11	34	0.9	12	1,852	0.93
12/6/2022	10,155	1,864	20	55	1.4	16	4,927	2.5
3/8/2023	12,359	2,204	20	56	2	15	4,544	2.3
6/22/2023	14,892	2,533	5.6	24	1.6	8.6	795	0.40
8/22/2023	16,348	1,456	3.7	14	1.0	5.6	948	0.47
11/22/2023	18,552	2,204	6.9	26	2.5	9.1	1,385	0.69
3/7/2024	21,088	2,536	5.3	21	2.6	7.5	1,069	0.53
6/15/2024	23,184	2,096	2.9	11	1.3	5.3	582	0.29
9/10/2024 ⁽⁴⁾	25,046	2,097	13.8	53	1.3	24.4	561	0.28
11/27/2024	26,913	1,867	11.1	41	1.8	18.2	402	0.20
Total Mass Recovery to Date			152	474	19.8	168	25,289	13

Notes:
 (1): an emissions air sample was recollected on 9/30/2022 due to air-collection errors during the 9/19/2022 site visit. Flow rates collected during the 9/19/2022 visit are used for emissions calculations
 (2): total operational hours are a summation of runtime hours collected from several generators and blower runtime meters used since system startup
 (3): runtime hours collected during a site visit on 11/9/2021
 (4): runtime hours estimated based on hour meter readings between 6/25/2024 and 8/28/2024 when the meter was noted to be broken plus readings between when the new meter was installed on 8/29/2024 and 9/10/2024
 cfm: cubic feet per minute
 cf: cubic feet
 µg/L: micrograms per liter
 lb/hr: pounds per hour
 -: not sampled
 PID: photoionization detector
 ppm: parts per million
 TVPH: total volatile petroleum hydrocarbons
 gray: Indicates result less than the stated laboratory reporting limit (RL); as such, RL used for calculating emissions.



APPENDIX A

Field Notes

28-6 #31 SVE SYSTEM BIWEEKLY O&M FORM

DATE: 10-11
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: KO TANK HIGH LEVEL

GENERATOR	SVE SYSTEM	READING	TIME
Hours (take photo) _____	Blower Hours (take photo) _____	<u>1028.8</u>	<u>1106</u>
Hertz _____	Pre K/O Vacuum (IWC) _____	<u>-32</u>	
Voltage _____	Post K/O Vacuum (IWC) _____	<u>-28</u>	
Battery Voltage _____	Pitot Tube 3" Flow (cfm) _____	<u>55</u>	
Oil Pressure _____	Leg A Rotameter (scfm) _____	<u>24</u>	
Oil Temp _____	Leg B Rotameter (scfm) _____	<u>25</u>	
	Inlet PID _____	<u>235.2</u>	
	Exhaust Post GAC PID _____	<u>478.1</u>	
	Liquid in K/O Sight Tube (Y/N) _____		
	K/O Liquid Drained (gallons) _____		

HOUSEKEEPING Check

Generator Lubrication

Inline Filter Clean

Clean Wye Strainer

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: _____ SAMPLE TIME: _____

Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)

OPERATING WELLS _____

ZONES

Change in Well Operation: _____

LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-2RD	<u>19.12</u>	<u>473.2</u>	
SVE-3	<u>19.09</u>	<u>745.5</u>	
SVE-5	<u>19.15</u>	<u>342.1</u>	
SVE-11D	<u>19.08</u>	<u>1153</u>	
SVE-13D	<u>19.15</u>	<u>1716</u>	

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-1	<u>16.77</u>	<u>112.1</u>	
SVE-2RS	<u>19.14</u>	<u>776.3</u>	
SVE-4	<u>19.04</u>	<u>347.9</u>	
SVE-11S	<u>19.09</u>	<u>298.4</u>	
SVE-13S	<u>19.12</u>	<u>1549</u>	
SVE-14S	<u>19.11</u>	<u>913.8</u>	

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-7D			
SVE-10	<u>19.40</u>	<u>427.7</u>	
SVE-12S	<u>19.63</u>	<u>688.7</u>	
SVE-15			

LEG B-2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7S			
SVE-8			
SVE-9			

COMMENTS/OTHER MAINTENANCE:

**28-6 #31 SVE SYSTEM
BIWEEKLY O&M FORM**

DATE: 10-28
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: KO TANK HIGH LEVEL

GENERATOR
Hours (take photo) _____
Hertz _____
Voltage _____
Battery Voltage _____
Oil Pressure _____
Oil Temp _____

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	1435.9	1151
Pre K/O Vacuum (IWC)	-33	
Post K/O Vacuum (IWC)	-27	
Pitot Tube 3" Flow (cfm)	50	
Leg A Rotameter (scfm)	24	
Leg B Rotameter (scfm)	25	
Inlet PID	334.7	
Exhaust Post GAC PID	460.7	
Liquid in K/O Sight Tube (Y/N)		
K/O Liquid Drained (gallons)		

HOUSEKEEPING Check
Generator Lubrication
Inline Filter Clean
Clean Wye Strainer

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: _____ SAMPLE TIME: _____
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS: _____

ZONES

Change in Well Operation: _____
LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-2RD	20.8	1463	
SVE-3	20.7	432.1	
SVE-5	20.7	999.3	
SVE-11D	20.8	1489	
SVE-13D	20.8	1697	

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-1	18.45	676.0	
SVE-2RS	20.8	973.2	
SVE-4	20.8	913.4	
SVE-11S	20.8	1489	
SVE-13S	20.8	1451	
SVE-14S	20.9	1200	

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-7D			
SVE-10	20.8	218.9	
SVE-12S	21.2	1732	
SVE-15			

LEG B-2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7S			
SVE-8			
SVE-9			

COMMENTS/OTHER MAINTENANCE:

28-6 #31 SVE SYSTEM BIWEEKLY O&M FORM

DATE: 11-15
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: KO TANK HIGH LEVEL

GENERATOR	SVE SYSTEM	READING	TIME
Hours (take photo)	Blower Hours (take photo)	1868.8	1340
Hertz	Pre K/O Vacuum (IWC)	-33	
Voltage	Post K/O Vacuum (IWC)	-27	
Battery Voltage	Pitot Tube 3" Flow (cfm)	50	
Oil Pressure	Leg A Rotameter (scfm)	24	
Oil Temp	Leg B Rotameter (scfm)	25	
	Inlet PID	227.1	
	Exhaust Post GAC PID	399.4	
	Liquid in K/O Sight Tube (Y/N)		
	K/O Liquid Drained (gallons)		

HOUSEKEEPING Check

Generator Lubrication

Inline Filter Clean

Clean Wye Strainer

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: _____ SAMPLE TIME: _____

Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)

OPERATING WELLS: _____

ZONES

Change in Well Operation: _____

LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-2RD	20.8	941.6	
SVE-3	20.8	729.8	
SVE-5	20.8	1468	
SVE-11D	20.8	1728	
SVE-13D	20.8	1895	

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-1	18.55	689.9	
SVE-2RS	20.8	918.5	
SVE-4	20.7	384.6	
SVE-11S	20.8	1281	
SVE-13S	20.8	1058	
SVE-14S	20.8	814.7	

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-7D			
SVE-10	20.8	250.1	
SVE-12S	21.1	779.5	
SVE-15			

LEG B-2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7S			
SVE-8			
SVE-9			

COMMENTS/OTHER MAINTENANCE: _____

28-6 #31 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 11/27/24
TIME ONSITE: 1200

O&M PERSONNEL: Arcal
TIME OFFSITE: 1255

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: KO TANK HIGH LEVEL

GENERATOR OFF
Hours (take photo) _____
Frequency (Hertz) _____
Voltage _____
Battery Voltage _____
Oil Pressure _____
Oil Temp _____

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	<u>2155.2</u>	<u>1207</u>
Pre K/O Vacuum (IWC)	<u>-34</u>	
Post K/O Vacuum (IWC)	<u>-28</u>	
Pitot Tube 3" Flow (cfm)	<u>50</u>	
Leg A Rotameter (cfm)	<u>24</u>	
Leg B Rotameter (cfm)	<u>26</u>	
Inlet PID (ppm)	<u>163.5</u>	
Exhaust Post GAC PID (ppm)	<u>310.3</u>	
Liquid in K/O Sight Tube (Y/N)		
K/O Liquid Drained (gallons)		

HOUSEKEEPING Check
Generator Lubrication
Inline Filter Clean
Clean Wye Strainer

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: #31 Influent 11/27/24 SAMPLE TIME: 1225
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)

OPERATING WELLS

ZONES

Change in Well Operation:

LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-2RD		<u>375.7</u>		
SVE-3		<u>273.3</u>		
SVE-5		<u>298.7</u>		
SVE-11D		<u>381.1</u>		
SVE-13D		<u>402.2</u>		

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-1		<u>416.6</u>		
SVE-2RS		<u>637.9</u>		
SVE-4		<u>634.1</u>		
SVE-11S		<u>1112</u>		
SVE-13S		<u>1028</u>		
SVE-14S		<u>976.6</u>		

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-7D	<u>closed</u>			
SVE-10		<u>111.2</u>		
SVE-12S		<u>421.2</u>		
SVE-15	<u>closed</u>			

LEG B-2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE-6	<u>closed</u>			
SVE-7S	<u>closed</u>			
SVE-8	<u>closed</u>			
SVE-9	<u>closed</u>			

COMMENTS/OTHER MAINTENANCE:

28-6 #31 SVE SYSTEM BIWEEKLY O&M FORM

DATE: 12-11
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: KO TANK HIGH LEVEL

GENERATOR

Hours (take photo) _____
 Hertz _____
 Voltage _____
 Battery Voltage _____
 Oil Pressure _____
 Oil Temp _____

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	2491.2	1206
Pre K/O Vacuum (IWC)	-33	
Post K/O Vacuum (IWC)	-27	
Pitot Tube 3" Flow (cfm)	50	
Leg A Rotameter (scfm)	23	
Leg B Rotameter (scfm)	27	
Inlet PID	337.0	
Exhaust Post GAC PID	573.9	
Liquid in K/O Sight Tube (Y/N)		
K/O Liquid Drained (gallons)		

HOUSEKEEPING Check

Generator Lubrication

Inline Filter Clean

Clean Wye Strainer

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID:	SAMPLE TIME:
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	
OPERATING WELLS	

ZONES

Change in Well Operation: _____

LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-2RD	20.8	1625	
SVE-3	20.7	751.6	
SVE-5	20.7	1718	
SVE-11D	20.6	1690	
SVE-13D	20.7	1965	

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-1	18.45	788.4	
SVE-2RS	20.8	1019	
SVE-4	20.6	837.1	
SVE-11S	20.7	1015	
SVE-13S	20.7	1701	
SVE-14S	20.7	1839	

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-7D			
SVE-10	20.2	117.6	
SVE-12S	20.7	2150	
SVE-15			

LEG B-2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7S			
SVE-8			
SVE-9			

COMMENTS/OTHER MAINTENANCE:

28-6 #31 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 12-30
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: _____ KO TANK HIGH LEVEL _____

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	2946.3	1250
Pre K/O Vacuum (IWC)	-34	
Post K/O Vacuum (IWC)	-28	
Pitot Tube 3" Flow (cfm)	30	
Leg A Rotameter (cfm)	23	
Leg B Rotameter (cfm)	27	
Inlet PID (ppm)	310.8	
Liquid in K/O Sight Tube (Y/N)		
K/O Liquid Drained (gallons)		

HOUSEKEEPING Check
Inline Filter Clean _____
Clean Wye Strainer _____

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: _____ SAMPLE TIME: _____
 Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
 OPERATING WELLS: _____

ZONES

Change in Well Operation:
LEG A DEEP

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	VELOCITY (FPM)	ADJUSTMENTS
SVE-2RD	20.8	1548		
SVE-3	20.8	763.9		
SVE-5	20.2	1698		
SVE-11D	20.8	1853		
SVE-13D	20.8	1921		

LEG A SHALLOW

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	VELOCITY (FPM)	ADJUSTMENTS
SVE-1	18.52	757.2		
SVE-2RS	20.8	1145		
SVE-4	20.8	683.4		
SVE-11S	20.7	1287		
SVE-13S	20.8	1981		
SVE-14S	20.8	1615		

LEG B-1

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	VELOCITY (FPM)	ADJUSTMENTS
SVE-7D				
SVE-10	20.2	243.7		
SVE-12S	20.8	1991		
SVE-15				

LEG B-2

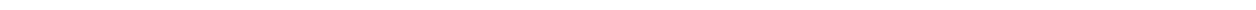
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	VELOCITY (FPM)	ADJUSTMENTS
SVE-6				
SVE-7S				
SVE-8				
SVE-9				

COMMENTS/OTHER MAINTENANCE:



APPENDIX B

Project Photographs



PROJECT PHOTOGRAPHS
San Juan 28-6 #31
Rio Arriba County, New Mexico
Hilcorp Energy Company

<p>Photograph 1</p> <p>Runtime meter taken on September 26, 2024 at 10:51 AM Hours = 668.6</p>	 <p>DIRECTION 69 deg(T) 36.62765°N ACCURACY 5 m 107.47823°W DATUM WGS84</p> <p>SJ 28-6 #31 SVE HOURS</p> <p>QUARTZ 0 0 6 6 8 . 6 HOURS 1/10</p> <p>2024-09-26 10:51:27-06:00</p>
<p>Photograph 2</p> <p>Runtime meter taken on December 30, 2024 at 12:50 PM Hours = 2,946.3</p>	 <p>DIRECTION 72 deg(T) 36.62764°N ACCURACY 4 m 107.47821°W DATUM WGS84</p> <p>SJ 28-6 #31 SVE HOURS</p> <p>QUARTZ 0 2 9 4 6 . 3 HOURS 1/10</p> <p>2024-12-30 12:50:48-07:00</p>



APPENDIX C

Laboratory Analytical Reports



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/13/2024 1:45:40 PM

JOB DESCRIPTION

Influent 112724

JOB NUMBER

885-16142-1

Eurofins Albuquerque
 4901 Hawkins NE
 Albuquerque NM 87109



Eurofins Albuquerque

Job Notes

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

Authorization



Generated
12/13/2024 1:45:40 PM

Authorized for release by
Michelle Garcia, Project Manager
michelle.garcia@et.eurofinsus.com
(505)345-3975

Client: Hilcorp Energy
Project/Site: Influent 112724

Laboratory Job ID: 885-16142-1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
QC Sample Results	10
QC Association Summary	13
Lab Chronicle	14
Certification Summary	15
Subcontract Data	18
Chain of Custody	30
Receipt Checklists	31

Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Influent 112724

Job ID: 885-16142-1

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: Influent 112724

Job ID: 885-16142-1

Job ID: 885-16142-1

Eurofins Albuquerque

Job Narrative 885-16142-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 12/3/2024 6:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°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.

Gasoline Range Organics

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

GC/MS VOA

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

Eurofins Albuquerque



Client Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

Client Sample ID: #31 Influent 112724

Lab Sample ID: 885-16142-1

Date Collected: 11/27/24 12:25

Matrix: Air

Date Received: 12/03/24 06:35

Sample Container: Tedlar Bag 1L

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1100		250	ug/L			12/04/24 17:20	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		52 - 172				12/04/24 17:20	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			12/04/24 17:20	50
1,1,1-Trichloroethane	ND		5.0	ug/L			12/04/24 17:20	50
1,1,2,2-Tetrachloroethane	ND		10	ug/L			12/04/24 17:20	50
1,1,2-Trichloroethane	ND		5.0	ug/L			12/04/24 17:20	50
1,1-Dichloroethane	ND		5.0	ug/L			12/04/24 17:20	50
1,1-Dichloroethene	ND		5.0	ug/L			12/04/24 17:20	50
1,1-Dichloropropene	ND		5.0	ug/L			12/04/24 17:20	50
1,2,3-Trichlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,2,3-Trichloropropane	ND		10	ug/L			12/04/24 17:20	50
1,2,4-Trichlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,2,4-Trimethylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,2-Dibromo-3-Chloropropane	ND		10	ug/L			12/04/24 17:20	50
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			12/04/24 17:20	50
1,2-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,2-Dichloroethane (EDC)	ND		5.0	ug/L			12/04/24 17:20	50
1,2-Dichloropropane	ND		5.0	ug/L			12/04/24 17:20	50
1,3,5-Trimethylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,3-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
1,3-Dichloropropane	ND		5.0	ug/L			12/04/24 17:20	50
1,4-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
1-Methylnaphthalene	ND		20	ug/L			12/04/24 17:20	50
2,2-Dichloropropane	ND		10	ug/L			12/04/24 17:20	50
2-Butanone	ND		50	ug/L			12/04/24 17:20	50
2-Chlorotoluene	ND		5.0	ug/L			12/04/24 17:20	50
2-Hexanone	ND		50	ug/L			12/04/24 17:20	50
2-Methylnaphthalene	ND		20	ug/L			12/04/24 17:20	50
4-Chlorotoluene	ND		5.0	ug/L			12/04/24 17:20	50
4-Isopropyltoluene	ND		5.0	ug/L			12/04/24 17:20	50
4-Methyl-2-pentanone	ND		50	ug/L			12/04/24 17:20	50
Acetone	ND		50	ug/L			12/04/24 17:20	50
Benzene	6.6		2.5	ug/L			12/04/24 17:20	50
Bromobenzene	ND		5.0	ug/L			12/04/24 17:20	50
Bromodichloromethane	ND		5.0	ug/L			12/04/24 17:20	50
Dibromochloromethane	ND		5.0	ug/L			12/04/24 17:20	50
Bromoform	ND		5.0	ug/L			12/04/24 17:20	50
Bromomethane	ND		15	ug/L			12/04/24 17:20	50
Carbon disulfide	ND		50	ug/L			12/04/24 17:20	50
Carbon tetrachloride	ND		5.0	ug/L			12/04/24 17:20	50
Chlorobenzene	ND		5.0	ug/L			12/04/24 17:20	50
Chloroethane	ND		10	ug/L			12/04/24 17:20	50
Chloroform	ND		5.0	ug/L			12/04/24 17:20	50

Euofins Albuquerque

Client Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

Client Sample ID: #31 Influent 112724

Lab Sample ID: 885-16142-1

Date Collected: 11/27/24 12:25

Matrix: Air

Date Received: 12/03/24 06:35

Sample Container: Tedlar Bag 1L

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		15	ug/L			12/04/24 17:20	50
cis-1,2-Dichloroethene	ND		5.0	ug/L			12/04/24 17:20	50
cis-1,3-Dichloropropene	ND		5.0	ug/L			12/04/24 17:20	50
Dibromomethane	ND		5.0	ug/L			12/04/24 17:20	50
Dichlorodifluoromethane	ND		5.0	ug/L			12/04/24 17:20	50
Ethylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
Hexachlorobutadiene	ND		5.0	ug/L			12/04/24 17:20	50
Isopropylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
Methyl-tert-butyl Ether (MTBE)	ND		5.0	ug/L			12/04/24 17:20	50
Methylene Chloride	ND		15	ug/L			12/04/24 17:20	50
n-Butylbenzene	ND		15	ug/L			12/04/24 17:20	50
N-Propylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
Naphthalene	ND		10	ug/L			12/04/24 17:20	50
sec-Butylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
Styrene	ND		5.0	ug/L			12/04/24 17:20	50
tert-Butylbenzene	ND		5.0	ug/L			12/04/24 17:20	50
Tetrachloroethene (PCE)	ND		5.0	ug/L			12/04/24 17:20	50
Toluene	13		5.0	ug/L			12/04/24 17:20	50
trans-1,2-Dichloroethene	ND		5.0	ug/L			12/04/24 17:20	50
trans-1,3-Dichloropropene	ND		5.0	ug/L			12/04/24 17:20	50
Trichloroethene (TCE)	ND		5.0	ug/L			12/04/24 17:20	50
Trichlorofluoromethane	ND		5.0	ug/L			12/04/24 17:20	50
Vinyl chloride	ND		5.0	ug/L			12/04/24 17:20	50
Xylenes, Total	ND		7.5	ug/L			12/04/24 17:20	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		12/04/24 17:20	50
Toluene-d8 (Surr)	109		70 - 130		12/04/24 17:20	50
4-Bromofluorobenzene (Surr)	100		70 - 130		12/04/24 17:20	50
Dibromofluoromethane (Surr)	109		70 - 130		12/04/24 17:20	50

Eurofins Albuquerque

Client Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

Client Sample ID: Influent 112724

Lab Sample ID: 885-16142-2

Date Collected: 11/27/24 14:50

Matrix: Air

Date Received: 12/03/24 06:35

Sample Container: Tedlar Bag 1L

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2100		250	ug/L			12/04/24 17:48	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		52 - 172				12/04/24 17:48	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			12/04/24 17:48	50
1,1,1-Trichloroethane	ND		5.0	ug/L			12/04/24 17:48	50
1,1,2,2-Tetrachloroethane	ND		10	ug/L			12/04/24 17:48	50
1,1,2-Trichloroethane	ND		5.0	ug/L			12/04/24 17:48	50
1,1-Dichloroethane	ND		5.0	ug/L			12/04/24 17:48	50
1,1-Dichloroethene	ND		5.0	ug/L			12/04/24 17:48	50
1,1-Dichloropropene	ND		5.0	ug/L			12/04/24 17:48	50
1,2,3-Trichlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,2,3-Trichloropropane	ND		10	ug/L			12/04/24 17:48	50
1,2,4-Trichlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,2,4-Trimethylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,2-Dibromo-3-Chloropropane	ND		10	ug/L			12/04/24 17:48	50
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			12/04/24 17:48	50
1,2-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,2-Dichloroethane (EDC)	ND		5.0	ug/L			12/04/24 17:48	50
1,2-Dichloropropane	ND		5.0	ug/L			12/04/24 17:48	50
1,3,5-Trimethylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,3-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
1,3-Dichloropropane	ND		5.0	ug/L			12/04/24 17:48	50
1,4-Dichlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
1-Methylnaphthalene	ND		20	ug/L			12/04/24 17:48	50
2,2-Dichloropropane	ND		10	ug/L			12/04/24 17:48	50
2-Butanone	ND		50	ug/L			12/04/24 17:48	50
2-Chlorotoluene	ND		5.0	ug/L			12/04/24 17:48	50
2-Hexanone	ND		50	ug/L			12/04/24 17:48	50
2-Methylnaphthalene	ND		20	ug/L			12/04/24 17:48	50
4-Chlorotoluene	ND		5.0	ug/L			12/04/24 17:48	50
4-Isopropyltoluene	ND		5.0	ug/L			12/04/24 17:48	50
4-Methyl-2-pentanone	ND		50	ug/L			12/04/24 17:48	50
Acetone	ND		50	ug/L			12/04/24 17:48	50
Benzene	4.4		2.5	ug/L			12/04/24 17:48	50
Bromobenzene	ND		5.0	ug/L			12/04/24 17:48	50
Bromodichloromethane	ND		5.0	ug/L			12/04/24 17:48	50
Dibromochloromethane	ND		5.0	ug/L			12/04/24 17:48	50
Bromoform	ND		5.0	ug/L			12/04/24 17:48	50
Bromomethane	ND		15	ug/L			12/04/24 17:48	50
Carbon disulfide	ND		50	ug/L			12/04/24 17:48	50
Carbon tetrachloride	ND		5.0	ug/L			12/04/24 17:48	50
Chlorobenzene	ND		5.0	ug/L			12/04/24 17:48	50
Chloroethane	ND		10	ug/L			12/04/24 17:48	50
Chloroform	ND		5.0	ug/L			12/04/24 17:48	50

Eurofins Albuquerque

Client Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

Client Sample ID: Influent 112724

Lab Sample ID: 885-16142-2

Date Collected: 11/27/24 14:50

Matrix: Air

Date Received: 12/03/24 06:35

Sample Container: Tedlar Bag 1L

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		15	ug/L			12/04/24 17:48	50
cis-1,2-Dichloroethene	ND		5.0	ug/L			12/04/24 17:48	50
cis-1,3-Dichloropropene	ND		5.0	ug/L			12/04/24 17:48	50
Dibromomethane	ND		5.0	ug/L			12/04/24 17:48	50
Dichlorodifluoromethane	ND		5.0	ug/L			12/04/24 17:48	50
Ethylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
Hexachlorobutadiene	ND		5.0	ug/L			12/04/24 17:48	50
Isopropylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
Methyl-tert-butyl Ether (MTBE)	ND		5.0	ug/L			12/04/24 17:48	50
Methylene Chloride	ND		15	ug/L			12/04/24 17:48	50
n-Butylbenzene	ND		15	ug/L			12/04/24 17:48	50
N-Propylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
Naphthalene	ND		10	ug/L			12/04/24 17:48	50
sec-Butylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
Styrene	ND		5.0	ug/L			12/04/24 17:48	50
tert-Butylbenzene	ND		5.0	ug/L			12/04/24 17:48	50
Tetrachloroethene (PCE)	ND		5.0	ug/L			12/04/24 17:48	50
Toluene	24		5.0	ug/L			12/04/24 17:48	50
trans-1,2-Dichloroethene	ND		5.0	ug/L			12/04/24 17:48	50
trans-1,3-Dichloropropene	ND		5.0	ug/L			12/04/24 17:48	50
Trichloroethene (TCE)	ND		5.0	ug/L			12/04/24 17:48	50
Trichlorofluoromethane	ND		5.0	ug/L			12/04/24 17:48	50
Vinyl chloride	ND		5.0	ug/L			12/04/24 17:48	50
Xylenes, Total	78		7.5	ug/L			12/04/24 17:48	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		12/04/24 17:48	50
Toluene-d8 (Surr)	111		70 - 130		12/04/24 17:48	50
4-Bromofluorobenzene (Surr)	102		70 - 130		12/04/24 17:48	50
Dibromofluoromethane (Surr)	107		70 - 130		12/04/24 17:48	50

QC Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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

Lab Sample ID: MB 885-16996/5
 Matrix: Air
 Analysis Batch: 16996

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	ug/L			12/04/24 14:03	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		52 - 172				12/04/24 14:03	1

Lab Sample ID: LCS 885-16996/4
 Matrix: Air
 Analysis Batch: 16996

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 (GRO)-C6-C10	500	495		ug/L		99	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	92		52 - 172				

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

Lab Sample ID: MB 885-17048/4
 Matrix: Air
 Analysis Batch: 17048

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			12/04/24 14:03	1
1,1,1-Trichloroethane	ND		0.10	ug/L			12/04/24 14:03	1
1,1,2,2-Tetrachloroethane	ND		0.20	ug/L			12/04/24 14:03	1
1,1,2-Trichloroethane	ND		0.10	ug/L			12/04/24 14:03	1
1,1-Dichloroethane	ND		0.10	ug/L			12/04/24 14:03	1
1,1-Dichloroethene	ND		0.10	ug/L			12/04/24 14:03	1
1,1-Dichloropropene	ND		0.10	ug/L			12/04/24 14:03	1
1,2,3-Trichlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,2,3-Trichloropropane	ND		0.20	ug/L			12/04/24 14:03	1
1,2,4-Trichlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,2,4-Trimethylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,2-Dibromo-3-Chloropropane	ND		0.20	ug/L			12/04/24 14:03	1
1,2-Dibromoethane (EDB)	ND		0.10	ug/L			12/04/24 14:03	1
1,2-Dichlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,2-Dichloroethane (EDC)	ND		0.10	ug/L			12/04/24 14:03	1
1,2-Dichloropropane	ND		0.10	ug/L			12/04/24 14:03	1
1,3,5-Trimethylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,3-Dichlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
1,3-Dichloropropane	ND		0.10	ug/L			12/04/24 14:03	1
1,4-Dichlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
1-Methylnaphthalene	ND		0.40	ug/L			12/04/24 14:03	1
2,2-Dichloropropane	ND		0.20	ug/L			12/04/24 14:03	1
2-Butanone	ND		1.0	ug/L			12/04/24 14:03	1
2-Chlorotoluene	ND		0.10	ug/L			12/04/24 14:03	1
2-Hexanone	ND		1.0	ug/L			12/04/24 14:03	1

Eurofins Albuquerque

QC Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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

Lab Sample ID: MB 885-17048/4

Client Sample ID: Method Blank

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 17048

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2-Methylnaphthalene	ND		0.40	ug/L			12/04/24 14:03	1
4-Chlorotoluene	ND		0.10	ug/L			12/04/24 14:03	1
4-Isopropyltoluene	ND		0.10	ug/L			12/04/24 14:03	1
4-Methyl-2-pentanone	ND		1.0	ug/L			12/04/24 14:03	1
Acetone	ND		1.0	ug/L			12/04/24 14:03	1
Benzene	ND		0.10	ug/L			12/04/24 14:03	1
Bromobenzene	ND		0.10	ug/L			12/04/24 14:03	1
Bromodichloromethane	ND		0.10	ug/L			12/04/24 14:03	1
Dibromochloromethane	ND		0.10	ug/L			12/04/24 14:03	1
Bromoform	ND		0.10	ug/L			12/04/24 14:03	1
Bromomethane	ND		0.30	ug/L			12/04/24 14:03	1
Carbon disulfide	ND		1.0	ug/L			12/04/24 14:03	1
Carbon tetrachloride	ND		0.10	ug/L			12/04/24 14:03	1
Chlorobenzene	ND		0.10	ug/L			12/04/24 14:03	1
Chloroethane	ND		0.20	ug/L			12/04/24 14:03	1
Chloroform	ND		0.10	ug/L			12/04/24 14:03	1
Chloromethane	ND		0.30	ug/L			12/04/24 14:03	1
cis-1,2-Dichloroethene	ND		0.10	ug/L			12/04/24 14:03	1
cis-1,3-Dichloropropene	ND		0.10	ug/L			12/04/24 14:03	1
Dibromomethane	ND		0.10	ug/L			12/04/24 14:03	1
Dichlorodifluoromethane	ND		0.10	ug/L			12/04/24 14:03	1
Ethylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
Hexachlorobutadiene	ND		0.10	ug/L			12/04/24 14:03	1
Isopropylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
Methyl-tert-butyl Ether (MTBE)	ND		0.10	ug/L			12/04/24 14:03	1
Methylene Chloride	ND		0.30	ug/L			12/04/24 14:03	1
n-Butylbenzene	ND		0.30	ug/L			12/04/24 14:03	1
N-Propylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
Naphthalene	ND		0.20	ug/L			12/04/24 14:03	1
sec-Butylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
Styrene	ND		0.10	ug/L			12/04/24 14:03	1
tert-Butylbenzene	ND		0.10	ug/L			12/04/24 14:03	1
Tetrachloroethene (PCE)	ND		0.10	ug/L			12/04/24 14:03	1
Toluene	ND		0.10	ug/L			12/04/24 14:03	1
trans-1,2-Dichloroethene	ND		0.10	ug/L			12/04/24 14:03	1
trans-1,3-Dichloropropene	ND		0.10	ug/L			12/04/24 14:03	1
Trichloroethene (TCE)	ND		0.10	ug/L			12/04/24 14:03	1
Trichlorofluoromethane	ND		0.10	ug/L			12/04/24 14:03	1
Vinyl chloride	ND		0.10	ug/L			12/04/24 14:03	1
Xylenes, Total	ND		0.15	ug/L			12/04/24 14:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		12/04/24 14:03	1
Toluene-d8 (Surr)	110		70 - 130		12/04/24 14:03	1
4-Bromofluorobenzene (Surr)	101		70 - 130		12/04/24 14:03	1
Dibromofluoromethane (Surr)	105		70 - 130		12/04/24 14:03	1

Eurofins Albuquerque

QC Sample Results

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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

Lab Sample ID: LCS 885-17048/3

Matrix: Air

Analysis Batch: 17048

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	20.2		ug/L		100	70 - 130
Benzene	20.1	21.6		ug/L		108	70 - 130
Chlorobenzene	20.1	21.0		ug/L		105	70 - 130
Toluene	20.2	20.7		ug/L		103	70 - 130
Trichloroethene (TCE)	20.2	19.4		ug/L		96	70 - 130

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		70 - 130
Toluene-d8 (Surr)	108		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	109		70 - 130

QC Association Summary

Client: Hilcorp Energy
Project/Site: Influent 112724

Job ID: 885-16142-1

GC/MS VOA

Analysis Batch: 16996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-16142-1	#31 Influent 112724	Total/NA	Air	8015M/D	
885-16142-2	Influent 112724	Total/NA	Air	8015M/D	
MB 885-16996/5	Method Blank	Total/NA	Air	8015M/D	
LCS 885-16996/4	Lab Control Sample	Total/NA	Air	8015M/D	

Analysis Batch: 17048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-16142-1	#31 Influent 112724	Total/NA	Air	8260B	
885-16142-2	Influent 112724	Total/NA	Air	8260B	
MB 885-17048/4	Method Blank	Total/NA	Air	8260B	
LCS 885-17048/3	Lab Control Sample	Total/NA	Air	8260B	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Influent 112724

Job ID: 885-16142-1

Client Sample ID: #31 Influent 112724

Lab Sample ID: 885-16142-1

Date Collected: 11/27/24 12:25

Matrix: Air

Date Received: 12/03/24 06:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015M/D		50	16996	RA	EET ALB	12/04/24 17:20
Total/NA	Analysis	8260B		50	17048	RA	EET ALB	12/04/24 17:20

Client Sample ID: Influent 112724

Lab Sample ID: 885-16142-2

Date Collected: 11/27/24 14:50

Matrix: Air

Date Received: 12/03/24 06:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015M/D		50	16996	RA	EET ALB	12/04/24 17:48
Total/NA	Analysis	8260B		50	17048	RA	EET ALB	12/04/24 17:48

Laboratory References:

= , 1120 South 27th Street, Billings, MT 59101, TEL (406)252-6325

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

Accreditation/Certification Summary

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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
8015M/D		Air	Gasoline Range Organics (GRO)-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

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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	02-25-25

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
8015M/D		Air	Gasoline Range Organics (GRO)-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

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Hilcorp Energy
 Project/Site: Influent 112724

Job ID: 885-16142-1

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



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

December 10, 2024

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

Work Order: B24120342 Quote ID: B15626

Project Name: Influent 112724, 88500531

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 12/4/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24120342-001	Influent 112724 (885-16142-2)	11/27/24 14:50	12/04/24	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 So. 27th Street, 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.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12



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

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Influent 112724, 88500531
Lab ID: B24120342-001
Client Sample ID: Influent 112724 (885-16142-2)

Report Date: 12/10/24
Collection Date: 11/27/24 14:50
Date Received: 12/04/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	22.05	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Nitrogen	77.75	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Carbon Dioxide	0.18	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Hexanes plus	0.02	Mol %		0.01		GPA 2261-13	12/06/24 11:05 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
Hexanes plus	0.008	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
GPM Total	0.008	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj
GPM Pentanes plus	0.008	gpm		0.001		GPA 2261-13	12/06/24 11:05 / jrj

CALCULATED PROPERTIES

Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-13	12/06/24 11:05 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-13	12/06/24 11:05 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	12/06/24 11:05 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-13	12/06/24 11:05 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	12/06/24 11:05 / jrj
Air, %	100.74			0.01		GPA 2261-13	12/06/24 11:05 / jrj
- The analysis was not corrected for air.							

COMMENTS

-
- 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)



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

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24120342

Report Date: 12/10/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-13								Batch: R433616		
Lab ID: B24120342-001ADUP	12 Sample Duplicate				Run: GCNGA-B_241206A			12/06/24 11:54		
Oxygen		22.1	Mol %	0.01				0.1	20	
Nitrogen		77.7	Mol %	0.01				0	20	
Carbon Dioxide		0.18	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		0.02	Mol %	0.01				0.0	20	
Lab ID: LCS120624								12/06/24 13:35		
	11 Laboratory Control Sample				Run: GCNGA-B_241206A					
Oxygen		0.60	Mol %	0.01	120	70	130			
Nitrogen		6.21	Mol %	0.01	103	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		5.04	Mol %	0.01	102	70	130			
Isobutane		1.79	Mol %	0.01	89	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		0.80	Mol %	0.01	100	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

Work Order Receipt Checklist

Hall Environmental

B24120342

Login completed by: Lyndsi E. LeProwse

Date Received: 12/4/2024

Reviewed by: darcy

Received by: KLP

Reviewed Date: 12/6/2024

Carrier name: FedEx NDA

- 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: 14.3°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.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

A chain of custody was received via email from Steven McQuiston on 12/4/24 @ 1623. LEL 12/05/24





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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT  	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
Washington	C1039	
Casper, WY 	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
Washington	C1012	
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090



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

December 10, 2024

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

Work Order: B24120535 Quote ID: B15626

Project Name: Influent 112724, 88500531

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 12/6/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24120535-001	#31 Influent 112724 (885-16142-1)	11/27/24 12:25	12/06/24	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 So. 27th Street, 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.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12



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

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Influent 112724, 88500531
Lab ID: B24120535-001
Client Sample ID: #31 Influent 112724 (885-16142-1)

Report Date: 12/10/24
Collection Date: 11/27/24 12:25
Date Received: 12/06/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	22.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Nitrogen	77.78	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Carbon Dioxide	0.16	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Ethane	0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Propane	0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-13	12/06/24 14:24 / jrj
Propane	0.003	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
GPM Total	0.015	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-13	12/06/24 14:24 / jrj

CALCULATED PROPERTIES

Gross BTU per cu ft @ Std Cond. (HHV)	2			1		GPA 2261-13	12/06/24 14:24 / jrj
Net BTU per cu ft @ std cond. (LHV)	2			1		GPA 2261-13	12/06/24 14:24 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-13	12/06/24 14:24 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-13	12/06/24 14:24 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	12/06/24 14:24 / jrj
Air, %	100.55			0.01		GPA 2261-13	12/06/24 14:24 / jrj
- The analysis was not corrected for air.							

COMMENTS

-
- 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)



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

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24120535

Report Date: 12/10/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-13								Batch: R433616		
Lab ID: B24120342-001ADUP	12 Sample Duplicate			Run: GCNGA-B_241206A				12/06/24 11:54		
Oxygen		22.1	Mol %	0.01				0.1	20	
Nitrogen		77.7	Mol %	0.01				0	20	
Carbon Dioxide		0.18	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		0.02	Mol %	0.01				0.0	20	
Lab ID: LCS120624								12/06/24 13:35		
	11 Laboratory Control Sample			Run: GCNGA-B_241206A						
Oxygen		0.60	Mol %	0.01	120	70	130			
Nitrogen		6.21	Mol %	0.01	103	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		5.04	Mol %	0.01	102	70	130			
Isobutane		1.79	Mol %	0.01	89	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		0.80	Mol %	0.01	100	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

Work Order Receipt Checklist

Hall Environmental

B24120535

Login completed by: Lyndsi E. LeProwse

Date Received: 12/6/2024

Reviewed by: dharris

Received by: DNH

Reviewed Date: 12/9/2024

Carrier name: FedEx NDA

- 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: 13.1°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.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None





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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT  	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
Washington	C1039	
Casper, WY 	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
Washington	C1012	
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

Chain-of-Custody Record

Client: Hulcorp
 Attn: Mitch Kullough
 Mailing Address:

Turn-Around Time:
 10 day TAR
 Standard Rush
 Project Name:
 Project #:

Phone #:
 email or Fax#: m.kullough@hulcorp.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Project Manager:
Stuart Hyde
 Sampler: AL
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 2.8 to 2.3.0 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
11/27/24	12:25	Air	#31 Influent 112724	2-Telder	—	1
11/27/24	14:50	Air	Influent 112724	2-Telder	—	2

Date: 11/27/24 Time: 1600
 Date: 11/27/24 Time: 1740
 Relinquished by: [Signature]
 Received by: [Signature] Date: 11/27/24 Time: 1600
 Received by: [Signature] Date: 12/3/24 Time: 6:35



HALL ENVIRONMENTAL
 ANALYSIS LABORA
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107
 885-16142 COC

Analysis Request	
BTEX / MTBE / TMB's (8021)	<input checked="" type="checkbox"/>
TPH:8015(D) (SRO / DRO / MRO)	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	<input checked="" type="checkbox"/>
Fixed Gas CO ₂ +O ₂	<input checked="" type="checkbox"/>

Remarks: Hyde
CC: dburns@ense.com, com
e-carol



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: 885-16142-1

Login Number: 16142

List Source: Eurofins Albuquerque

List Number: 1

Creator: McQuiston, Steven

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



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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 420630

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 420630
	Action Type: [REPORT] Alternative Remediation Report (C-141AR)

CONDITIONS

Created By	Condition	Condition Date
nvez	SVE reviewed. 1. Continue O&M & sampling as stated in report. 2. Submit next quarterly report by April 15, 2025.	2/7/2025