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

ENSOLUM

October 14, 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: Third Quarter 2024 – SVE System Update
Scott 4M
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCE2003650476

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Third Quarter 2024 –SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the Scott 4M natural gas production well (Site), located in Section 17, Township 31 North, and Range 10 West in San Juan County (Figure 1). The SVE system has operated since January 2021 to remediate subsurface soil impacts resulting from approximately 42 barrels (bbls) of natural gas condensate released from an aboveground storage tank. This report summarizes Site activities performed in July, August, and September of 2024.

SVE SYSTEM SPECIFICATIONS

An upgraded SVE system was installed at the Site at the end of September 2022 and consists of 3-phase, 3.4 horsepower Republic Model KVHRC500 blower capable of producing a flow of 221 cubic feet per minute (cfm) and a vacuum of 76 inches of water column (IWC). The system is powered by a permanent power drop and is intended to run 24 hours per day. Seven SVE wells are currently present at the Site (SVE01 through SVE07, shown on Figure 2). SVE wells SVE01 through SVE03 are screened at depth intervals ranging from 25 feet to 45 feet below ground surface (bgs) in order to remediate deep soil impacts located at the Site. SVE wells SVE04 and SVE05 are screened at depth intervals ranging from 5 feet to 25 feet bgs in order to remediate shallow soil impacts at the Site. SVE wells SVE06 and SVE07 were installed at the Site in order to complete the pilot test conducted in 2021; however, these wells are not located in impacted areas and are not connected to the permanent SVE system.

THIRD QUARTER 2024 ACTIVITIES

During the third quarter 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. Prior to June 13, 2024, vacuum was applied to SVE wells SVE01 through SVE05 in order to induce flow in impacted soil zones. On June 13, 2024, the valves for SVE03 and SVE04 were closed in order to focus extraction on the remaining SVE wells with higher PID readings. Between June 13, 2024

and September 18, 2024, the SVE system operated for 2,326.6 hours for a runtime efficiency of 100 percent (%). Photographs of the runtime meter for calculating the third quarter runtime efficiency are presented as Appendix B. The SVE system operational hours and calculated percent runtime are presented in Table 1.

A third quarter 2024 vapor sample was collected on September 18, 2024, from a sample port located between the SVE piping manifold 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 in Albuquerque, New Mexico for analysis of total volatile petroleum hydrocarbons [TVPH – also known 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 Processors Association (GPA) Method 2261. A summary of analytical data collected during this sampling event and historical sampling events is summarized in Table 2, with the full laboratory analytical report included as Appendix C.

Vapor sample data and measured flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 3). Based on these estimates, 8,746 pounds (4.4 tons) of TVPH have been removed by the system to date. Of note, after further evaluation, it was determined that the flow rate recorded on the rotameter for the March 4, 2024 field event and used in Table 3 was anomalously high as compared to other flow rates. The flow rate has been recalculated using the velocity obtained with a thermal anemometer on the same date and the total mass removal rates have been revised in the table.

RECOMMENDATIONS

Bi-weekly O&M visits will continue to be performed by Ensolum and/or Hilcorp personnel to ensure the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum) until it is determined that SVE is no longer effective, at which point a workplan for soil confirmation sampling will be submitted to the NMOCD for review and approval. Deviations from regular SVE system operations will be noted on field logs and included in the following quarterly report.

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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Senior Managing Geologist
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shyde@ensolum.com

Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist
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Attachments:

Figure 1	Site Location
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

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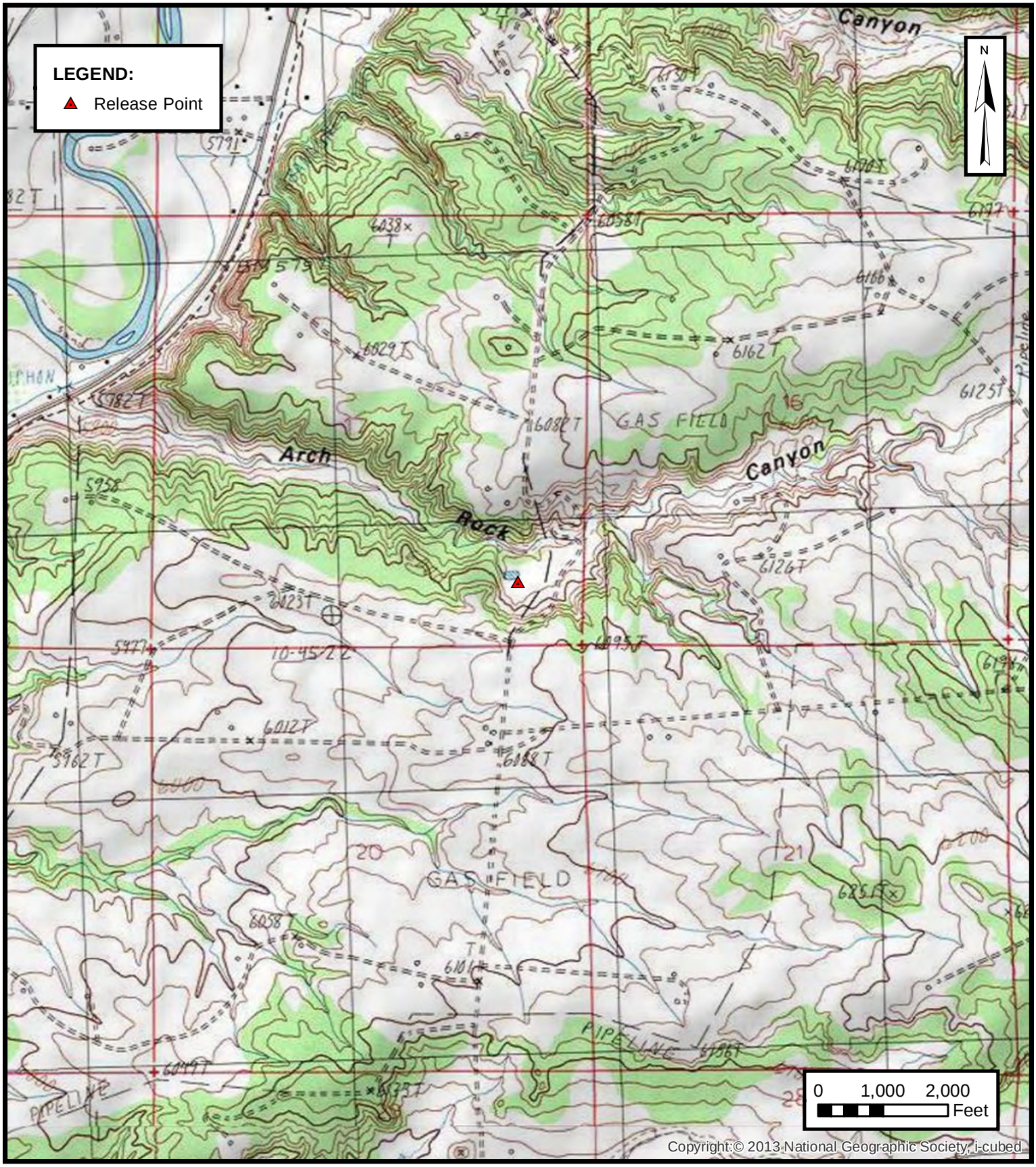
Figures



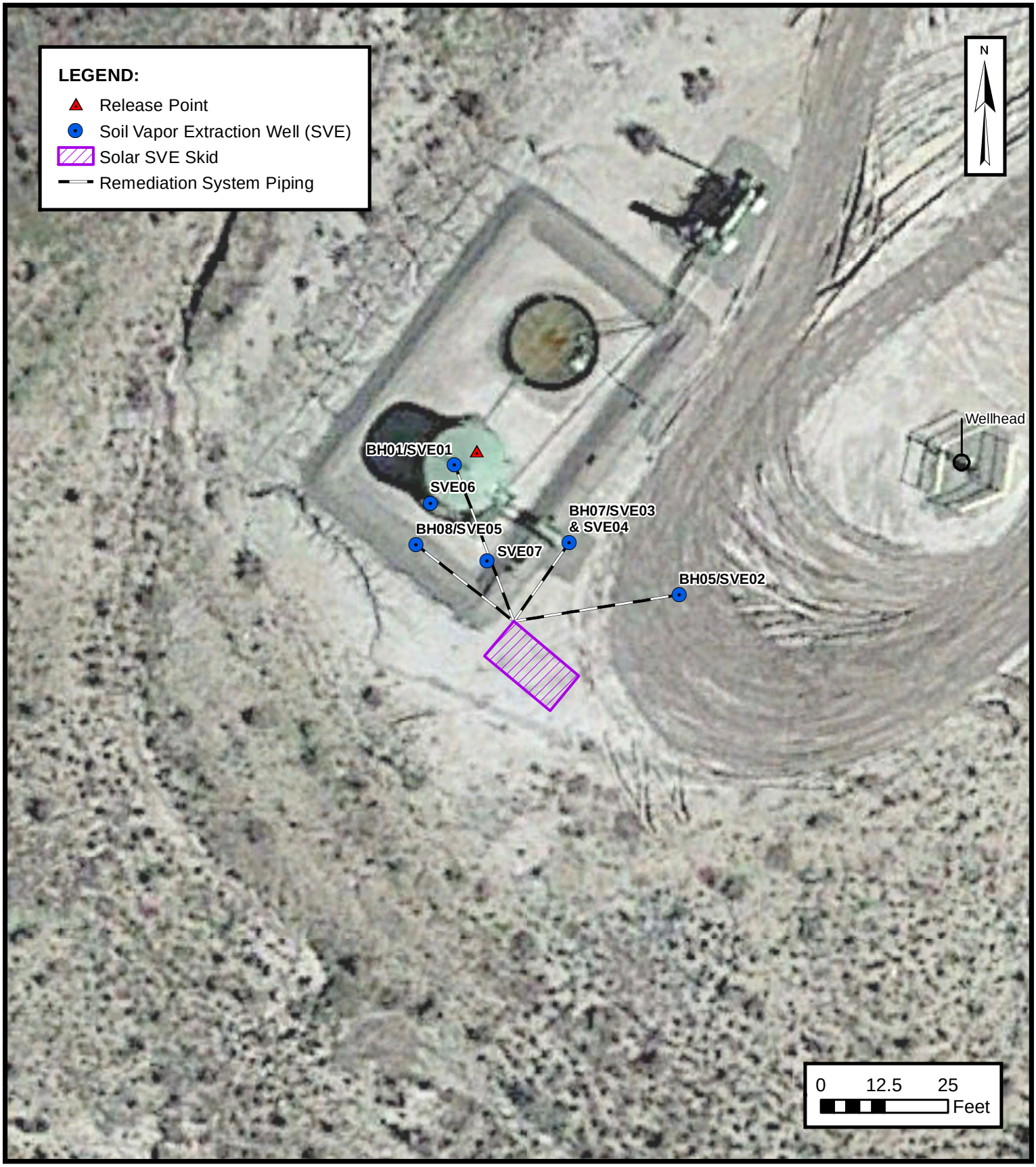
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE LOCATION

HILCORP ENERGY COMPANY
SCOTT 4M
SESE SEC 17 T31N R1OW, San Juan County, New Mexico
36.893345° N, 107.899185° W

PROJECT NUMBER: 07A1988016

FIGURE
1



ENSOLUM
Environmental & Hydrogeologic Consultants

SVE SYSTEM CONFIGURATION

HILCORP ENERGY COMPANY
SCOTT 4M
SESE SEC 17 T31N R1OW, San Juan County, New Mexico
36.893345° N, 107.899185° W

PROJECT NUMBER: 07A1988016

FIGURE
2

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Tables

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TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
Scott 4M
Hilcorp Energy Company
San Juan County, New Mexico

Date	Total Operational Hours	Delta Hours	Days	Percent Runtime
6/13/2024	21,288	--	--	--
9/18/2024	23,615	2,326.6	97.0	100%

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
Scott 4M
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 (%)
2/1/2021	118	85	240	10	64	18,000	--	--
9/7/2021	53	40	280	24	240	15,000	--	--
9/29/2021	316	210	1,800	240	2,200	85,000	--	--
12/2/2021	232	48	320	32	310	50,000	16.60%	1.03%
3/15/2022	402	38	430	63	660	18,000	20.80%	0.473%
6/16/2022	89	1.3	13	1.6	17	750	21.57%	0.15%
9/28/2022	476	9.6	120	19	220	5,900	20.73%	0.90%
12/12/2022	198	2.5	26	4.9	59	2,100	21.65%	0.27%
3/9/2023	274	1.0	19	4.0	50	1,500	21.64%	0.19%
6/22/2023	247	1.2	16	2.4	34	940	21.42%	0.29%
8/23/2023	186	1.0	12	2.0	29	930	21.49%	0.32%
11/27/2023	129	0.86	11	1.5	22	860	21.40%	0.22%
3/5/2024	57.5	*<0.50*	5.6	0.76	12	260	22.25%	0.10%
6/13/2024	88.7	0.67	8.0	1.1	18	490	21.78%	0.15%
9/18/2024	66.0	10	62	<5.0	69	270	22.10%	0.06%

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

Grey: Below laboratory reporting limit

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TABLE 3
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Scott 4M
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)
2/1/2021	118	85	240	10	64	18,000
9/7/2021	53	40	280	24	240	15,000
9/29/2021	316	210	1,800	240	2,200	85,000
12/2/2021	232	48	320	32	310	50,000
3/15/2022	402	38	430	63	660	18,000
6/16/2022	89	1.3	13	1.6	17	750
9/28/2022 (1)	476	9.6	120	19	220	5,900
12/12/2022 (2)	198	2.5	26	4.9	59	2,100
3/9/2023	274	1.0	19	4.0	50	1,500
6/22/2023	247	1.2	16	2.4	34	940
8/23/2023	186	1.0	12	2.0	29	930
11/27/2023	129	0.86	11	1.5	22	860
3/5/2024	57.5	*0.50*	5.6	0.76	12	260
6/13/2024	88.7	0.67	8.0	1.10	18	490
9/18/2024	66.0	10	62	*5.0*	69	270
Average	195	30	224	27	267	13,333

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)
2/1/2021	22	1,980	1,980	0.0070	0.020	0.00082	0.0053	1.5
9/7/2021	22	2,841,168	2,839,188	0.0051	0.021	0.0014	0.013	1.4
9/29/2021	10	2,979,528	138,360	0.0047	0.039	0.0049	0.046	1.9
12/2/2021	3.5	3,106,158	126,630	0.00169	0.0139	0.00178	0.0164	0.88
3/15/2022	8.0	3,519,486	413,328	0.00129	0.0112	0.00142	0.0145	1.02
6/16/2022	14	4,412,322	892,836	0.00103	0.0116	0.00169	0.0177	0.49
9/9/2022 (1)	12	5,218,146	805,824	0.00024	0.0030	0.00046	0.0053	0.15
12/10/2022 (2)	46	10,939,074	5,720,928	0.00104	0.0126	0.00206	0.0240	0.69
3/9/2023	31	14,846,376	3,907,302	0.00020	0.0026	0.00052	0.0063	0.21
6/22/2023 (3)	36	20,301,024	5,454,648	0.00015	0.0024	0.00043	0.0057	0.16
8/23/2023 (4)	38	23,648,084	3,347,060	0.00015	0.0020	0.00031	0.0044	0.13
11/27/2023	50	30,561,884	6,913,800	0.00017	0.0022	0.00033	0.0048	0.17
3/5/2024	35	35,557,364	4,995,480	0.00009	0.0011	0.00015	0.0022	0.07
6/13/2024	38	41,019,788	5,462,424	0.00008	0.0010	0.00013	0.0021	0.05
9/18/2024	40	46,603,628	5,583,840	0.00080	0.0052	0.00046	0.0065	0.06
			Average	0.0016	0.010	0.0011	0.012	0.59

Mass Recovery

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
2/1/2021	1.5	1.5	0.010	0.030	0.0012	0.0079	2.2	0.0011
9/7/2021	2,152	2,151	11	46	3.0	27	2,920	1.5
9/29/2021	2,383	231	1.1	9.0	1.1	11	431	0.22
12/2/2021	2,986	603	1.0	8.4	1.1	9.9	533	0.27
3/15/2022	3,847	861	1.1	9.7	1.2	12	876	0.44
6/16/2022	4,910	1,063	1.1	12.3	1.8	19	522	0.26
9/9/2022 (1)	6,029	1,119	0.3	3.3	0.5	6.0	167	0.08
12/10/2022 (2)	8,102	2,073	2.2	26	4.3	50	1,426	0.71
3/9/2023	10,203	2,101	0.43	5.5	1.1	13	438	0.22
6/22/2023	12,728	2,525	0.37	6.0	1.1	14	415	0.21
8/23/2023	14,209	1,481	0.23	2.9	0.46	6.6	195	0.10
11/27/2023	16,514	2,305	0.40	5.0	0.75	11	386	0.19
3/5/2024	18,892	2,379	0.21	2.6	0.35	5.3	174	0.087
6/13/2024	21,288	2,396	0.20	2.3	0.32	5.1	128	0.064
9/18/2024	23,615	2,327	1.9	12	1.1	15	132	0.066
		Total Mass Recovery to Date	21	151	18	205	8,746	4.4

Notes:

(1): SVE system hours and flow rates were collected during operation and maintenance visit on 9/9/2022

(2): PID measurement, SVE system hours, and flow rates were collected during operation and maintenance visit on 12/10/2022

(3): SVE system rotameter was malfunctioning during site visit on 6/22/2023. Flow rate was estimated based on the average flow recorded during site visits between 4/13/2023 and 6/7/2023.

(4): SVE system rotameter was oscillating during third quarter 2023 site visits. Flow rate was estimated based on average historical flow for the current system

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

gray: laboratory reporting limit used for calculating emissions

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APPENDIX A

Field Notes

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 7-11
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)**	21959.8	1437
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
~~Pre~~ Post K/O Vacuum (IWC)	-60	
Inlet Rotameter Flow (scfm)	38	
Inlet PID	21.3	
Exhaust PID	116.7	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

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

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	41.8	96.5	
SVE02	44.5	18.2	
~~SVE03~~			
~~SVE04~~			
SVE05	16.09	63.6	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

- Replaced influent tubing

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 7-30
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)**	22419.4	1310
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
~~Pre~~ Post K/O Vacuum (IWC)	60	
Inlet Rotameter Flow (scfm)	38	
Inlet PID	15.7	
Exhaust PID	136.9	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

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

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	42.2	118.4	
SVE02	43.8	39.6	
~~SVE03~~			
~~SVE04~~			
SVE05	16.37	84.7	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 8-13
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)**	22753.0	1544
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
Post ~~Pre~~ K/O Vacuum (IWC)	-61	
Inlet Rotameter Flow (scfm)	39	
Inlet PID	3.9	
Exhaust PID	116.8	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

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

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	90.8	78.3	
SVE02	41.4	3.1	
~~SVE03~~			
~~SVE04~~			
SVE05	15.12	73.9	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 8-22
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)**	22964.9	1140
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
Post ~~Pre~~ K/O Vacuum (IWC)	-61	
Inlet Rotameter Flow (scfm)	40	
Inlet PID	8.2	
Exhaust PID	131.6	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

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

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	41.4	77.7	
SVE02	43.0	6.2	
~~SVE03~~			
~~SVE04~~			
SVE05	15.02	33.4	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 9-9
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)**	23398.5	1317
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
~~Pre~~ Post K/O Vacuum (IWC)	-60	
Inlet Rotameter Flow (scfm)	40	
Inlet PID	13.3	
Exhaust PID	109.2	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

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

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	40.6	59.3	
SVE02	42.2	11.6	
~~SVE03~~			
~~SVE04~~			
SVE05	14.42	47.5	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

SCOTT 4M SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 9-18
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)	23614.8	1332
Voltage In		
Amperage In		
Voltage Out		
Amperage Out		
KiloWatts		
KiloWatt-Hours		
Solar Controller Status		
Post ~~Pre~~-K/O Vacuum (IWC)	-60	
Inlet Rotameter Flow (scfm)	40	
Inlet PID	66.0	
Exhaust PID	116.6	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		

TIMER SETTINGS	
Month	**Timer Setting**
January	8 AM to 7 PM
February	8 AM to 7 PM
March	8 AM to 8 PM
April	8 AM to 9 PM
May	7 AM to 9 PM
June	6 AM to 9 PM
July	6 AM to 9 PM
August	7 AM to 9 PM
September	8 AM to 9 PM
October	8 AM to 8 PM
November	9 AM to 8 PM
December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING

SAMPLE ID: SVE-1 SAMPLE TIME: 1330
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)
OPERATING WELLS

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01	41.2	110.6	
SVE02	41.9	34.5	
~~SVE03~~			
~~SVE04~~			
SVE05	14.08	78.6	
SVE06 (OBSERVATION WELL)			
SVE07 (OBSERVATION WELL)			

COMMENTS/OTHER MAINTENANCE:

ENSOLUM

APPENDIX B

Project Photographs

PROJECT PHOTOGRAPHS
Scott 4M
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1 Runtime meter taken on June 13, 2024 at 12:34 PM Hours = 21,288.2		
Photograph 2 Runtime meter taken on September 18, 2024 at 1:32 PM Hours = 23,614.8		

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

ENSOLUM

APPENDIX C

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 10/10/2024 5:23:56 PM

JOB DESCRIPTION

Scott 4M

JOB NUMBER

885-12289-1

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

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10/10/2024 5:23:56 PM

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

Client: Hilcorp Energy
Project/Site: Scott 4M

Laboratory Job ID: 885-12289-1

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Definitions/Glossary

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

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: Scott 4M

Job ID: 885-12289-1

Job ID: 885-12289-1 Eurofins Albuquerque

Job Narrative
885-12289-1

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 sample was received on 9/20/2024 7:15 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 17.2°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.

Client Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

Client Sample ID: SVE-1

Lab Sample ID: 885-12289-1

Date Collected: 09/18/24 13:30
Matrix: Air
Date Received: 09/20/24 07:15
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 [C6 - C10]	270	H	25		ug/L			10/02/24 14:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*52 - 172*		*10/02/24 14:19*	*5*

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			10/02/24 14:19	5
1,1,1-Trichloroethane	ND		5.0		ug/L			10/02/24 14:19	5
1,1,2,2-Tetrachloroethane	ND		10		ug/L			10/02/24 14:19	5
1,1,2-Trichloroethane	ND		5.0		ug/L			10/02/24 14:19	5
1,1-Dichloroethane	ND		5.0		ug/L			10/02/24 14:19	5
1,1-Dichloroethene	ND		5.0		ug/L			10/02/24 14:19	5
1,1-Dichloropropene	ND		5.0		ug/L			10/02/24 14:19	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
1,2,3-Trichloropropane	ND		10		ug/L			10/02/24 14:19	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			10/02/24 14:19	5
1,2-Dibromoethane (EDB)	ND		5.0		ug/L			10/02/24 14:19	5
1,2-Dichlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
1,2-Dichloroethane (EDC)	ND		5.0		ug/L			10/02/24 14:19	5
1,2-Dichloropropane	ND		5.0		ug/L			10/02/24 14:19	5
1,3,5-Trimethylbenzene	7.4		5.0		ug/L			10/02/24 14:19	5
1,3-Dichlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
1,3-Dichloropropane	ND		5.0		ug/L			10/02/24 14:19	5
1,4-Dichlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
1-Methylnaphthalene	ND		20		ug/L			10/02/24 14:19	5
2,2-Dichloropropane	ND		10		ug/L			10/02/24 14:19	5
2-Butanone	ND		50		ug/L			10/02/24 14:19	5
2-Chlorotoluene	ND		5.0		ug/L			10/02/24 14:19	5
2-Hexanone	ND		50		ug/L			10/02/24 14:19	5
2-Methylnaphthalene	ND		20		ug/L			10/02/24 14:19	5
4-Chlorotoluene	ND		5.0		ug/L			10/02/24 14:19	5
4-Isopropyltoluene	ND		5.0		ug/L			10/02/24 14:19	5
4-Methyl-2-pentanone	ND		50		ug/L			10/02/24 14:19	5
Acetone	ND		50		ug/L			10/02/24 14:19	5
Benzene	10		5.0		ug/L			10/02/24 14:19	5
Bromobenzene	ND		5.0		ug/L			10/02/24 14:19	5
Bromodichloromethane	ND		5.0		ug/L			10/02/24 14:19	5
Dibromochloromethane	ND		5.0		ug/L			10/02/24 14:19	5
Bromoform	ND		5.0		ug/L			10/02/24 14:19	5
Bromomethane	ND		15		ug/L			10/02/24 14:19	5
Carbon disulfide	ND		50		ug/L			10/02/24 14:19	5
Carbon tetrachloride	ND		5.0		ug/L			10/02/24 14:19	5
Chlorobenzene	ND		5.0		ug/L			10/02/24 14:19	5
Chloroethane	ND		10		ug/L			10/02/24 14:19	5
Chloroform	ND		5.0		ug/L			10/02/24 14:19	5

Client Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

Client Sample ID: SVE-1
Date Collected: 09/18/24 13:30
Date Received: 09/20/24 07:15
Sample Container: Tedlar Bag 1L

Lab Sample ID: 885-12289-1
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			10/02/24 14:19	5
cis-1,2-Dichloroethene	ND		5.0		ug/L			10/02/24 14:19	5
cis-1,3-Dichloropropene	ND		5.0		ug/L			10/02/24 14:19	5
Dibromomethane	ND		5.0		ug/L			10/02/24 14:19	5
Dichlorodifluoromethane	ND		5.0		ug/L			10/02/24 14:19	5
Ethylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
Hexachlorobutadiene	ND		5.0		ug/L			10/02/24 14:19	5
Isopropylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
Methyl-tert-butyl Ether (MTBE)	ND		5.0		ug/L			10/02/24 14:19	5
Methylene Chloride	ND		15		ug/L			10/02/24 14:19	5
n-Butylbenzene	ND		15		ug/L			10/02/24 14:19	5
N-Propylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
Naphthalene	ND		10		ug/L			10/02/24 14:19	5
sec-Butylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
Styrene	ND		5.0		ug/L			10/02/24 14:19	5
tert-Butylbenzene	ND		5.0		ug/L			10/02/24 14:19	5
Tetrachloroethene (PCE)	ND		5.0		ug/L			10/02/24 14:19	5
Toluene	**62**		5.0		ug/L			10/02/24 14:19	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			10/02/24 14:19	5
trans-1,3-Dichloropropene	ND		5.0		ug/L			10/02/24 14:19	5
Trichloroethene (TCE)	ND		5.0		ug/L			10/02/24 14:19	5
Trichlorofluoromethane	ND		5.0		ug/L			10/02/24 14:19	5
Vinyl chloride	ND		5.0		ug/L			10/02/24 14:19	5
Xylenes, Total	**69**		7.5		ug/L			10/02/24 14:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*		*10/02/24 14:19*	*5*
Toluene-d8 (Surr)	*113*		*70 - 130*		*10/02/24 14:19*	*5*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/02/24 14:19*	*5*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*10/02/24 14:19*	*5*

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: MB 885-13549/4
Matrix: Air
Analysis Batch: 13549

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		5.0		ug/L			10/02/24 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*52 - 172*		*10/02/24 11:28*	*1*

Lab Sample ID: LCS 885-13549/3
Matrix: Air
Analysis Batch: 13549

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]			4250	4100		ug/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*52 - 172*

Lab Sample ID: 885-12289-1 DU
Matrix: Air
Analysis Batch: 13549

Client Sample ID: SVE-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	270	H		255		ug/L				7	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*52 - 172*

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

Lab Sample ID: MB 885-13499/1005
Matrix: Air
Analysis Batch: 13499

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			10/02/24 13:30	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			10/02/24 13:30	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,3-Trichloropropane	ND		2.0		ug/L			10/02/24 13:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			10/02/24 13:30	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: MB 885-13499/1005
Matrix: Air
Analysis Batch: 13499

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		1.0		ug/L			10/02/24 13:30	1
1,2-Dichloropropane	ND		1.0		ug/L			10/02/24 13:30	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,3-Dichloropropane	ND		1.0		ug/L			10/02/24 13:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1-Methylnaphthalene	ND		4.0		ug/L			10/02/24 13:30	1
2,2-Dichloropropane	ND		2.0		ug/L			10/02/24 13:30	1
2-Butanone	ND		10		ug/L			10/02/24 13:30	1
2-Chlorotoluene	ND		1.0		ug/L			10/02/24 13:30	1
2-Hexanone	ND		10		ug/L			10/02/24 13:30	1
2-Methylnaphthalene	ND		4.0		ug/L			10/02/24 13:30	1
4-Chlorotoluene	ND		1.0		ug/L			10/02/24 13:30	1
4-Isopropyltoluene	ND		1.0		ug/L			10/02/24 13:30	1
4-Methyl-2-pentanone	ND		10		ug/L			10/02/24 13:30	1
Acetone	ND		10		ug/L			10/02/24 13:30	1
Benzene	ND		1.0		ug/L			10/02/24 13:30	1
Bromobenzene	ND		1.0		ug/L			10/02/24 13:30	1
Bromodichloromethane	ND		1.0		ug/L			10/02/24 13:30	1
Dibromochloromethane	ND		1.0		ug/L			10/02/24 13:30	1
Bromoform	ND		1.0		ug/L			10/02/24 13:30	1
Bromomethane	ND		3.0		ug/L			10/02/24 13:30	1
Carbon disulfide	ND		10		ug/L			10/02/24 13:30	1
Carbon tetrachloride	ND		1.0		ug/L			10/02/24 13:30	1
Chlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
Chloroethane	ND		2.0		ug/L			10/02/24 13:30	1
Chloroform	ND		1.0		ug/L			10/02/24 13:30	1
Chloromethane	ND		3.0		ug/L			10/02/24 13:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
Dibromomethane	ND		1.0		ug/L			10/02/24 13:30	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/02/24 13:30	1
Ethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Hexachlorobutadiene	ND		1.0		ug/L			10/02/24 13:30	1
Isopropylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0		ug/L			10/02/24 13:30	1
Methylene Chloride	ND		3.0		ug/L			10/02/24 13:30	1
n-Butylbenzene	ND		3.0		ug/L			10/02/24 13:30	1
N-Propylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Naphthalene	ND		2.0		ug/L			10/02/24 13:30	1
sec-Butylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Styrene	ND		1.0		ug/L			10/02/24 13:30	1
tert-Butylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Tetrachloroethene (PCE)	ND		1.0		ug/L			10/02/24 13:30	1
Toluene	ND		1.0		ug/L			10/02/24 13:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
Trichloroethene (TCE)	ND		1.0		ug/L			10/02/24 13:30	1
Trichlorofluoromethane	ND		1.0		ug/L			10/02/24 13:30	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: MB 885-13499/1005
Matrix: Air
Analysis Batch: 13499

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0		ug/L			10/02/24 13:30	1
Xylenes, Total	ND		1.5		ug/L			10/02/24 13:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*10/02/24 13:30*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*10/02/24 13:30*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*10/02/24 13:30*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*10/02/24 13:30*	*1*

Lab Sample ID: MB 885-13499/5
Matrix: Air
Analysis Batch: 13499

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			10/02/24 13:30	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			10/02/24 13:30	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloroethane	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
1,1-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,3-Trichloropropane	ND		2.0		ug/L			10/02/24 13:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			10/02/24 13:30	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dichloroethane (EDC)	ND		1.0		ug/L			10/02/24 13:30	1
1,2-Dichloropropane	ND		1.0		ug/L			10/02/24 13:30	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1,3-Dichloropropane	ND		1.0		ug/L			10/02/24 13:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
1-Methylnaphthalene	ND		4.0		ug/L			10/02/24 13:30	1
2,2-Dichloropropane	ND		2.0		ug/L			10/02/24 13:30	1
2-Butanone	ND		10		ug/L			10/02/24 13:30	1
2-Chlorotoluene	ND		1.0		ug/L			10/02/24 13:30	1
2-Hexanone	ND		10		ug/L			10/02/24 13:30	1
2-Methylnaphthalene	ND		4.0		ug/L			10/02/24 13:30	1
4-Chlorotoluene	ND		1.0		ug/L			10/02/24 13:30	1
4-Isopropyltoluene	ND		1.0		ug/L			10/02/24 13:30	1
4-Methyl-2-pentanone	ND		10		ug/L			10/02/24 13:30	1
Acetone	ND		10		ug/L			10/02/24 13:30	1
Benzene	ND		1.0		ug/L			10/02/24 13:30	1
Bromobenzene	ND		1.0		ug/L			10/02/24 13:30	1
Bromodichloromethane	ND		1.0		ug/L			10/02/24 13:30	1
Dibromochloromethane	ND		1.0		ug/L			10/02/24 13:30	1

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: MB 885-13499/5
Matrix: Air
Analysis Batch: 13499

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		1.0		ug/L			10/02/24 13:30	1
Bromomethane	ND		3.0		ug/L			10/02/24 13:30	1
Carbon disulfide	ND		10		ug/L			10/02/24 13:30	1
Carbon tetrachloride	ND		1.0		ug/L			10/02/24 13:30	1
Chlorobenzene	ND		1.0		ug/L			10/02/24 13:30	1
Chloroethane	ND		2.0		ug/L			10/02/24 13:30	1
Chloroform	ND		1.0		ug/L			10/02/24 13:30	1
Chloromethane	ND		3.0		ug/L			10/02/24 13:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
Dibromomethane	ND		1.0		ug/L			10/02/24 13:30	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/02/24 13:30	1
Ethylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Hexachlorobutadiene	ND		1.0		ug/L			10/02/24 13:30	1
Isopropylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0		ug/L			10/02/24 13:30	1
Methylene Chloride	ND		3.0		ug/L			10/02/24 13:30	1
n-Butylbenzene	ND		3.0		ug/L			10/02/24 13:30	1
N-Propylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Naphthalene	ND		2.0		ug/L			10/02/24 13:30	1
sec-Butylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Styrene	ND		1.0		ug/L			10/02/24 13:30	1
tert-Butylbenzene	ND		1.0		ug/L			10/02/24 13:30	1
Tetrachloroethene (PCE)	ND		1.0		ug/L			10/02/24 13:30	1
Toluene	ND		1.0		ug/L			10/02/24 13:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/02/24 13:30	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			10/02/24 13:30	1
Trichloroethene (TCE)	ND		1.0		ug/L			10/02/24 13:30	1
Trichlorofluoromethane	ND		1.0		ug/L			10/02/24 13:30	1
Vinyl chloride	ND		1.0		ug/L			10/02/24 13:30	1
Xylenes, Total	ND		1.5		ug/L			10/02/24 13:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*10/02/24 13:30*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*10/02/24 13:30*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*10/02/24 13:30*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*10/02/24 13:30*	*1*

Lab Sample ID: LCS 885-13499/4
Matrix: Air
Analysis Batch: 13499

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	21.2		ug/L		105	70 - 130		
Benzene			20.1	23.0		ug/L		114	70 - 130		
Chlorobenzene			20.1	20.5		ug/L		102	70 - 130		
Toluene			20.2	20.9		ug/L		104	70 - 130		
Trichloroethene (TCE)			20.2	21.1		ug/L		105	70 - 130		

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: LCS 885-13499/4
Matrix: Air
Analysis Batch: 13499

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130

Lab Sample ID: 885-12289-1 DU
Matrix: Air
Analysis Batch: 13499

Client Sample ID: SVE-1
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	ND			ND		ug/L				NC	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	7.4			6.84		ug/L				8	20
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	10			9.77		ug/L				2	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

QC Sample Results

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

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

Lab Sample ID: 885-12289-1 DU
Matrix: Air
Analysis Batch: 13499

Client Sample ID: SVE-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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	ND			ND		ug/L				NC	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	62			57.5		ug/L				7	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	69			65.2		ug/L				6	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*

QC Association Summary

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

GC/MS VOA

Analysis Batch: 13499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12289-1	SVE-1	Total/NA	Air	8260B	
MB 885-13499/1005	Method Blank	Total/NA	Air	8260B	
MB 885-13499/5	Method Blank	Total/NA	Air	8260B	
LCS 885-13499/4	Lab Control Sample	Total/NA	Air	8260B	
885-12289-1 DU	SVE-1	Total/NA	Air	8260B	

Analysis Batch: 13549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-12289-1	SVE-1	Total/NA	Air	8015M/D	
MB 885-13549/4	Method Blank	Total/NA	Air	8015M/D	
LCS 885-13549/3	Lab Control Sample	Total/NA	Air	8015M/D	
885-12289-1 DU	SVE-1	Total/NA	Air	8015M/D	

Lab Chronicle

Client: Hilcorp Energy
Project/Site: Scott 4M

Job ID: 885-12289-1

Client Sample ID: SVE-1

Date Collected: 09/18/24 13:30
Date Received: 09/20/24 07:15

Lab Sample ID: 885-12289-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015M/D		5	13549	CM	EET ALB	10/02/24 14:19
Total/NA	Analysis	8260B		5	13499	CM	EET ALB	10/02/24 14:19

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: Scott 4M

Job ID: 885-12289-1

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 [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: Scott 4M

Job ID: 885-12289-1

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
8015M/D		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: Scott 4M

Job ID: 885-12289-1

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

September 27, 2024

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

Work Order: B24092169 Quote ID: B15626
Project Name: Scott 4M, 88501698

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 9/24/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24092169-001	SVE-1 (885-12289-1)	09/18/24 13:30	09/24/24	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.

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Scott 4M, 88501698
Lab ID: B24092169-001
Client Sample ID: SVE-1 (885-12289-1)

Report Date: 09/27/24
Collection Date: 09/18/24 13:30
DateReceived: 09/24/24
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	22.10	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Nitrogen	77.81	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Carbon Dioxide	0.06	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	09/25/24 11:29 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	09/25/24 11:29 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	09/25/24 11:29 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	09/25/24 11:29 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	09/25/24 11:29 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	09/25/24 11:29 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	09/25/24 11:29 / jrj
Air, %	100.97			0.01		GPA 2261-95	09/25/24 11:29 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	09/25/24 11:29 / 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:** B24092169 **Report Date:** 09/27/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R429509
Lab ID: **B24092171-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_240925A				09/25/24 01:07
Oxygen		18.9	Mol %	0.01				0.5	20	
Nitrogen		78.5	Mol %	0.01				0.1	20	
Carbon Dioxide		2.52	Mol %	0.01				1.2	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		0.11	Mol %	0.01				8.7	20	
Lab ID: **LCS092524**	11	Laboratory Control Sample				Run: GCNGA-B_240925A				09/25/24 02:45
Oxygen		0.65	Mol %	0.01	130	70	130			
Nitrogen		6.12	Mol %	0.01	102	70	130			
Carbon Dioxide		0.98	Mol %	0.01	99	70	130			
Methane		75.0	Mol %	0.01	100	70	130			
Ethane		5.99	Mol %	0.01	100	70	130			
Propane		5.02	Mol %	0.01	102	70	130			
Isobutane		1.40	Mol %	0.01	70	70	130			
n-Butane		1.99	Mol %	0.01	99	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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Work Order Receipt Checklist

Hall Environmental

B24092169

Login completed by: Danielle N. Harris
Date Received: 9/24/2024

Reviewed by: mstephens
Received by: SAY

Reviewed Date: 9/25/2024
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:	21.5°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

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: Garcia, Michelle	Carrier Tracking No(s):	COC No: 885-2088.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: michelle.garcia@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 #: 885-12289-1
Address: 1120 South 27th Street, ,	Due Date Requested: 9/27/2024	Analysis Requested		Preservation Codes: -
City: Billings	TAT Requested (days):			
State, Zip: MT, 59101				
Phone: 406-252-6325(Tel)	PO #:			
Email:	WO #:			
Project Name: Scott 4M	Project #: 88501698			
Site:	SSOW#:			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:						
SVE-1 (885-12289-1)	9/18/24	13:30 Mountain	G	Air			X	1	See Attached Instructions
									B24092169

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
Tom McCahe	9/23/24 1330				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 09.24.24 0955	Company ELI-Billings

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

Ver: 05/06/2024

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: Scott 4M

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☐ Yes ☒ No chucky

# of Coolers: 1

Cooler Temp(including CF): 17.3-0.1= 17.2 (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8710[illegible]
Tel. 505-345-3975 Fax 505-345-4107

885-12289 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)	8015 TVPH	Fixed gas O_2 & CO_2
9-18	1330	air	SVE-1	2 Tedlar		1								✓			✓	✓

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/19/24	1314				9/19/24	1314
9/19/24	1724			courier	9/20/24	7:15

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.

Login Sample Receipt Checklist

Client: Hilcorp Energy Job Number: 885-12289-1

Login Number: 12289 **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").	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 392557

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 392557
	Action Type: [REPORT] Alternative Remediation Report (C-141AR)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue O&M & sampling as stated in report. 2. Submit next quarterly report by January 15, 2025.	10/25/2024