1. Continue with O & M schedule.
2. Submit next quarterly report by Jul 31, 2023.

ENSOLUM

April 11, 2023

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

Re: First Quarter 2023 – SVE System Update
OH Randel #5
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NVF1602039091
Ensolum Project No. 07A1988025

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *First Quarter 2023 – SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the OH Randel #5 natural gas production well (Site), located in Unit D of Section 10, Township 26 North, and Range 11 West in San Juan County, New Mexico (Figure 1). Specifically, this report summarizes Site activities performed in January, February, and March of 2023 to the New Mexico Oil Conservation Division (NMOCD).

SVE SYSTEM SPECIFICATIONS

The current operation at the Site consists of two SVE systems, each with a dedicated blower, knockout tank, and control panel. The original SVE system ("SVE Skid 1") was installed at the Site in 2016 by XTO Energy (the previous owner and operator of the Site) and subsequently upgraded by Hilcorp in 2019. This SVE system consists of a 2 horsepower Atlantic Blower AB-301 blower capable of producing 110 standard cubic feet per minute (scfm) of flow and 72 inches of water column (IWC) vacuum. A second SVE system ("SVE Skid 2") was installed at the Site and became operational on March 11, 2022 in order to more efficiently address residual soil impacts at the Site. Specifically, the new system was built with a 3.4 horsepower Republic Manufacturing HRC501 blower capable of producing 221 scfm of flow and 72 IWC vacuum. When operated concurrently, the two SVE systems are able to induce the necessary flow and vacuum on all SVE wells at the Site simultaneously with no need to rotate operating wells.

SVE wells are located and screened in the "Secondary" and "Tertiary" Source Zones, as identified in the WSP USA Inc. *Site Summary Report,* dated October 1, 2021. Once the new SVE Skid 2 was installed at the Site, new manifolds were constructed so SVE Skid 1 operated wells located in the Secondary Source Zone (SVE-5 and SVE-8) and SVE Skid 2 operated wells located in the Tertiary Source Zone (SVE-6, SVE-7, SVE-10, SVE-11, SVE-12, SVE-13, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, SVE-19, SVE-20, SVE-21, and SVE-22). The SVE well locations are shown on Figure 2.

FIRST QUARTER 2023 ACTIVITIES

During the first quarter of 2023, Ensolum and Hilcorp personnel performed bi-weekly operation and maintenance (O&M) visits to verify the system was operating as designed and to perform any required maintenance. Field notes taken during O&M visits are presented in Appendix A. During the first quarter of 2023, all SVE wells, except SVE-6 and SVE-11, were operated in order to induce flow in areas with remaining soil impacts. SVE wells SVE-6 and SVE-11 are screened at depths shallower than the remaining soil impacts at the Site and have been turned off in order for the SVE system to induce a higher flow and vacuum on the remaining open wells. Between December 7, 2022 and April 10, 2023, SVE Skid 1 operated for 2,226 hours with a runtime efficiency of 100 percent (%) and Skid 2 operated for 2,217 hours with a runtime efficiency of 99%. Table 1 presents the SVE system operational hours and percent runtime. Appendix B presents photographs of the runtime meter for calculating the first quarter runtime efficiency.

Emissions samples were collected from sample ports located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the emission samples were field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). First quarter 2023 emissions samples were collected from both SVE skids on March 10, 2023. The emission samples were collected directly into two 1-Liter Tedlar® bags and submitted to Hall Environmental Analysis Laboratory (Hall) 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.

Table 2 presents a summary of analytical data collected during the sampling events and from historical sampling events, with the full laboratory analytical report included in Appendix C. Emission sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE systems (Tables 3 and 4). Based on these estimates, a total of 721,672 pounds (360 tons) of TVPH have been removed by the systems to date.

In addition to the standard O&M visits performed during the first quarter of 2023, the broken rotameter on Skid 2 noted in the fourth quarter 2022 field notes was replaced on February 2, 2023. A leaking valve was also discovered on well SVE-20 during regular O&M visits and subsequently repaired on March 3, 2023.

RECOMMENDATIONS

Bi-weekly O&M visits will continue to be performed by Ensolum and/or Hilcorp personnel to verify the SVE systems are 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 systems until asymptotic emissions are observed. At that time, an evaluation of residual petroluem 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 New Mexico Oil Conservation Division. If you should have any questions or comments regarding this report, please contact the undersigned.

Sincerely,
Ensolum, LLC

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

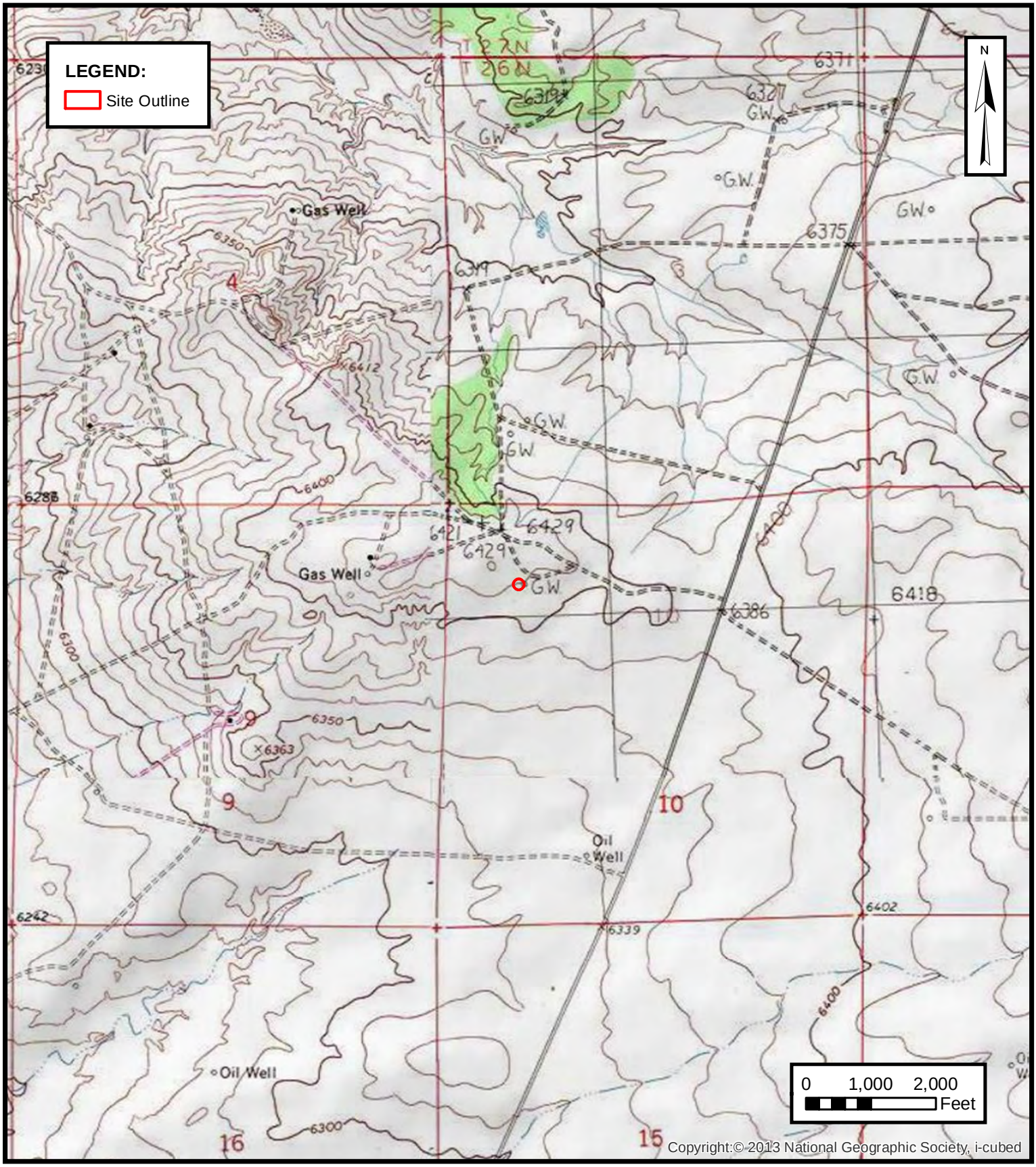
Daniel R. Moir, PG
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

Figure 1	Site Location Map
Figure 2	SVE System Layout
Table 1	Soil Vapor Extraction System Runtime Calculations
Table 2	Soil Vapor Extraction System Emissions Analytical Results
Table 3	Soil Vapor Extraction System Mass Removal and Emissions – Skid 1
Table 4	Soil Vapor Extraction System Mass Removal and Emissions – Skid 2
Appendix A	Field Notes
Appendix B	Project Photographs
Appendix C	Laboratory Analytical Reports

ENSOLUM

FIGURES



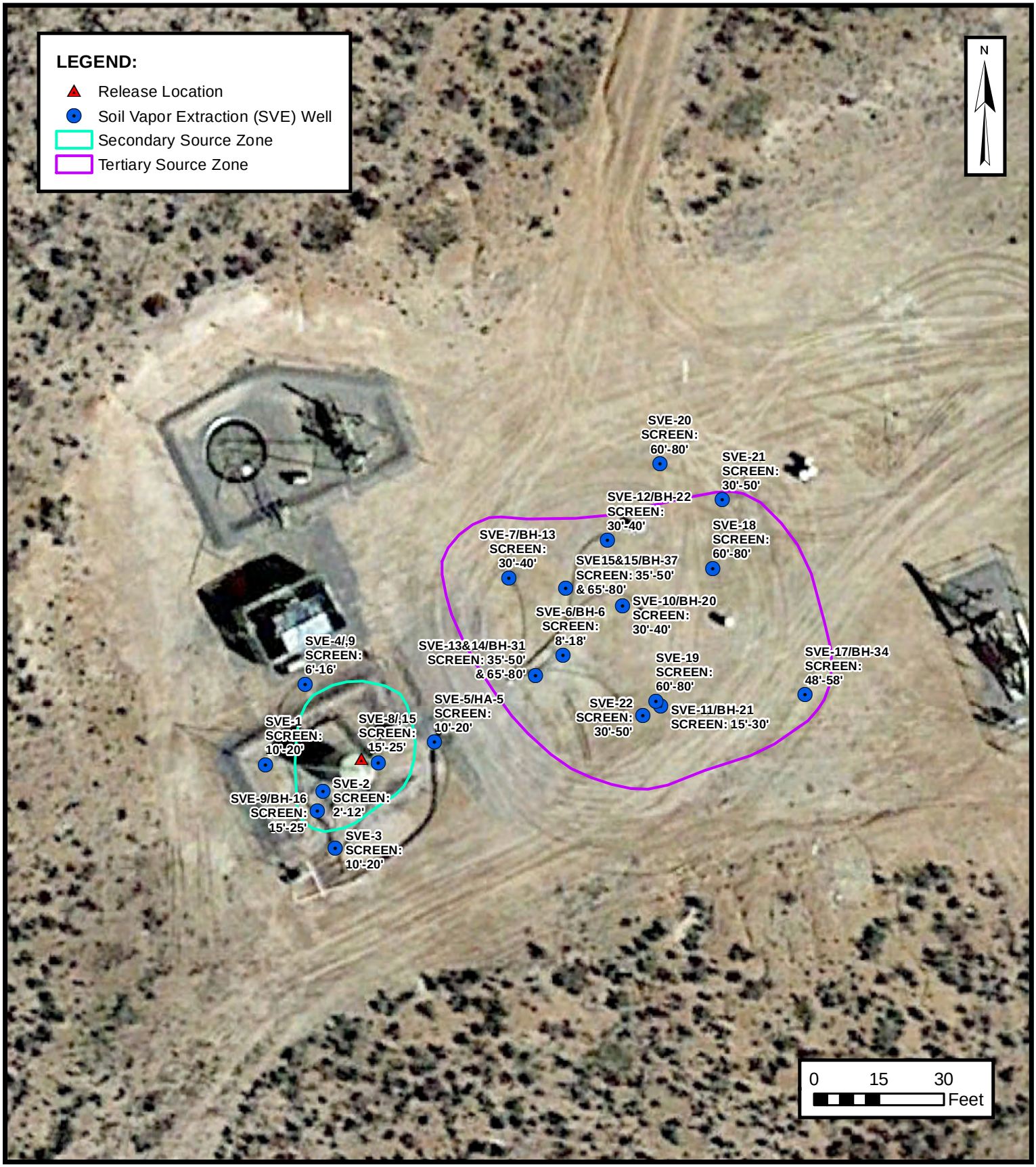
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE LOCATION MAP

HILCORP ENERGY COMPANY
OH RANDEL #5
NWNW SEC 10 T26N R11W, San Juan County, New Mexico
36.506504° N, 107.996993° W

PROJECT NUMBER: 07A1988025

FIGURE
1



ENSOLUM
Environmental & Hydrogeologic Consultants

SVE SYSTEM LAYOUT

HILCORP ENERGY COMPANY
OH RANDEL #5
NWNW SEC 10 T26N R11W, San Juan County, New Mexico
36.506504° N, 107.996993° W

PROJECT NUMBER: 07A1988025

FIGURE
2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
OH Randel #5
Hilcorp Energy Company
San Juan County, New Mexico

SVE Skid 1 - Original System Runtime Operation

Date	Total Operational Hours	Delta Hours	Days	Percent Runtime
12/7/2022	38,598.3	--	--	--
3/10/2023	40,824.1	2,226	93	100%

SVE Skid 2 - New System Runtime Operation

Date	Total Operational Hours	Delta Hours	Days	Percent Runtime
12/7/2022	6,507.2	--	--	--
3/10/2023	8,724.2	2,217	93	99%

ENSOLUM

TABLE 2
SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
OH Randel #5
Hilcorp Energy Company
San Juan County, New Mexico

SVE Skid 1 - Original System Analytical Results

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
8/11/2016	4,072	160	1,700	61	500	46,000	--	--
8/17/2018	719	130	230	10	110	8,900	--	--
6/28/2019	1,257	7,200	15,000	360	3,000	460,000	--	--
12/16/2019	1,685	1,800	4,400	83	660	170,000	--	--
3/10/2020	897	1,700	3,300	89	700	130,000	--	--
4/30/2020	1,853	2,440	4,737	128	1,005	186,592	--	--
6/24/2020 (1)	--	--	--	--	--	--	--	--
11/10/2020	1,385	320	1,100	43	380	43,000	21.45%	0.35%
2/10/2021	865	360	950	35	250	32,000	--	--
6/11/2021	400	170	390	11	110	18,000	22.05%	0.15%
9/29/2021	505	99	190	7.0	55	8,200	--	--
12/15/2021	1,163	130	290	6.9	62	37,137	22.21%	0.092%
3/21/2022	274	6.5	23	0.98	11	550	22.38%	0.041%
6/17/2022	88	5.5	19	0.69	7.0	650	21.83%	0.060%
9/22/2022	55	9.0	42	1.9	20	670	21.84%	0.10%
12/7/2022	28	5.2	34	1.5	15	480	21.92%	0.05%
3/10/2023	87	2.5	8.2	<1.0	4.2	260	21.85%	0.06%

SVE Skid 2 - Original System Analytical Results

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)	Oxygen (%)	Carbon Dioxide (%)
3/21/2022	1,354	310	510	13	120	35,000	21.81%	0.31%
6/17/2022	1,058	200	410	<10	66	33,000	21.27%	0.39%
9/8/2022	1,258	479	1,190	26	1,041	31,900	20.10%	0.50%
12/7/2022	918	230	370	9.1	65	18,000	21.53%	0.36%
3/10/2023	1,790	140	230	7.5	60	12,000	21.71%	0.17%

Notes:

(1) - blower not operational for sampling in May and June 2020
GRO: gasoline range organics
µg/L: microgram per liter
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
%: percent
--: not sampled
<0.037 : gray indicates result less than the stated laboratory reporting limit (PQL)

ENSOLUM

TABLE 3
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS - SKID 1
OH Randel #5
Hilcorp Energy Company
San Juan County, New Mexico

Flow and Laboratory Analysis

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
8/11/2016	4,072	160	1,700	61	500	46,000
8/17/2018	719	130	230	10	110	8,900
12/16/2019	1,902	1,800	4,400	83	660	170,000
3/10/2020	897	1,700	3,300	89	700	130,000
4/30/2020	1,853	2,440	4,737	128	1,005	186,592
6/24/2020	Blower Not Operational (1)					
11/10/2021	1,385	320	1,100	43	380	43,000
2/10/2021	865	360	950	35	250	32,000
6/11/2021	400	170	390	11	110	18,000
9/29/2021	505	99	190	7.0	55	8,200
12/15/2021	1,163	130	290	6.9	62	37,137
3/21/2022	274	6.5	23	1.0	11	550
6/17/2022	88	6	19	0.7	7	650
9/22/2022	55	9.0	42	1.9	20	670
12/7/2022	28	5.2	34	1.5	15	480
3/10/2023	87	2.5	8.2	*1.0*	4.2	260
Average	953	489	1,161	32	259	45,496

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)
8/11/2016	105	31,500	31,500	0.063	0.67	0.024	0.20	18
8/17/2018	100	59,647,500	59,616,000	0.054	0.36	0.013	0.11	10
12/16/2019	110	109,635,900	49,988,400	0.40	0.95	0.019	0.16	37
3/10/2020	110	121,707,300	12,071,400	0.72	1.6	0.035	0.28	62
4/30/2020 (1)	105	130,917,900	9,210,600	0.81	1.6	0.043	0.33	62
6/24/2020 (1)	Blower Not Operational							
11/10/2021	105	130,917,900	0	0	0	0	0	0
2/10/2021	92	143,580,780	12,662,880	0.12	0.35	0.013	0.11	13
6/11/2021	90	158,657,580	15,076,800	0.089	0.23	0.0077	0.061	8.4
9/29/2021	69	168,249,960	9,592,380	0.035	0.075	0.0023	0.021	3.4
12/15/2021	90	178,207,560	9,957,600	0.039	0.081	0.0023	0.020	7.6
3/16/2022	70	187,343,904	9,136,344	0.018	0.041	0.0010	0.010	4.9
6/17/2022	70	196,703,520	9,359,616	0.0016	0.0055	0.00022	0.0024	0.16
9/21/2022	65	205,627,890	8,924,370	0.0018	0.0074	0.00031	0.0033	0.16
12/7/2022	70	213,411,456	7,783,566	0.0019	0.0099	0.00045	0.0046	0.15
3/10/2023	73	223,160,241	9,748,785	0.0011	0.0058	0.00034	0.0026	0.10
			Average	0.16	0.40	0.011	0.088	15

Flow and Laboratory Analysis

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
8/11/2016	5	5	0.31	3.3	0.12	1.0	90	0.045
8/17/2018	9,941	9,936	539	3,586	132	1,133	102,008	51
12/16/2019	17,515	7,574	3,007	7,214	145	1,200	278,728	139
3/10/2020	19,344	1,829	1,317	2,897	65	512	112,870	56
4/30/2020 (1)	20,806	1,462	1,188	2,307	62	489	90,884	45
6/24/2020 (1)	Blower Not Operational							
11/10/2021	20,806	0	0	0	0	0	0	0
2/10/2021	23,100	2,294	268	809	31	249	29,600	15
6/11/2021	25,892	2,792	249	630	22	169	23,495	12
9/29/2021	28,209	2,317	80	173	5.4	49	7,833	3.9
12/15/2021	30,053	1,844	71	149	4.3	36	14,070	7.0
3/16/2022	32,228	2,175	39	89	2.2	21	10,732	5.4
6/17/2022	34,457	2,228	3.5	12	0.49	5.3	350	0.18
9/21/2022	36,745	2,288	4.0	17	0.72	7.5	367	0.18
12/7/2022	38,598	1,853	3.4	18	0.82	8.5	279	0.14
3/10/2023	40,824	2,226	2.3	13	0.76	5.8	225	0.11
		Total Mass Recovery to Date	6,773	17,918	471	3,887	671,532	336

Notes:

(1) - blower not operational for sampling in May and June 2020
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

ENSOLUM

TABLE 4
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS - SKID 2
OH Randel #5
Hilcorp Energy Company
San Juan County, New Mexico

Flow and Laboratory Analysis

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
3/21/2022	1,354	310	510	13	120	35,000
6/17/2022	1,058	200	410	*10*	66	33,000
9/8/2022	1,258	479	1,190	26	1,041	31,900
12/7/2022	918	230	370	9.0	65	18,000
3/10/2023	1,790	140	230	7.5	60	12,000
Average	1,276	272	542	13	270	25,980

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)
3/16/2022	70	499,800	499,800	0.081	0.13	0.0034	0.031	9.2
6/17/2022	60	8,533,560	8,033,760	0.057	0.10	0.0026	0.021	7.6
9/8/2022	56	15,138,648	6,605,088	0.071	0.17	0.0038	0.12	6.8
12/7/2022 (1)	56	22,499,736	7,361,088	0.074	0.16	0.0037	0.12	5.2
3/10/2023	58	30,214,896	7,715,160	0.040	0.065	0.0018	0.014	3.3
			Average	0.065	0.127	0.0030	0.060	6.4

Flow and Laboratory Analysis

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
3/16/2022	119	119	10	16	0.41	3.7	1,090	0.55
6/17/2022	2,351	2,232	128	230	5.8	47	17,027	8.5
9/8/2022	4,316	1,966	140	329	7.4	228	13,361	6.7
12/7/2022 (1)	6,507	2,191	163	358	8.0	254	11,448	5.7
3/10/2023	8,724	2,217	89	144	4.0	30	7,214	3.6
		Total Mass Recovery to Date	529	1,078	26	562	50,140	25

Notes:

(1): rotameter float frozen in place, flow rate based on 11/16/2022 site visit flow rate and similar applied vacuum recorded during 11/16/2022 and 12/7/2022 site visits
cf: cubic feet
cfm: cubic feet per minute
µg/L: micrograms per liter
lb/hr: pounds per hour
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
gray: laboratory reporting limit used for calculating emissions

ENSOLUM

APPENDIX A

Field Notes

OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 1-6 O&M PERSONNEL: B Sinclair
TIME ONSITE: TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	39315.17	7219.2
Inlet Vacuum (IWC)	52	58
Inlet Flow from Rotameter (SCFM)	70	*
Exhaust Vacuum (IWC)	-54	-65
Inlet PID	38.12	1037
Exhaust PID	50.09	1288
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)	2.5	13.5

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		8.96	
SVE-8		131.9	
9		26.93	

Zone B - Tertiary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		580	
SVE-10		125.9	
SVE-11			
SVE-12		675.2	
SVE-13		857.6	
SVE-14		1031	
SVE-15		585.7	
SVE-16		1088	
SVE-17		458.2	
SVE-18		1068	
SVE-19		1171	
SVE-20		872.7	
SVE-21		114	
SVE-22		384.2	

COMMENTS/OTHER MAINTENANCE:

* Float stuck at top of rotameter

OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 1-18
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:	KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	19699.76	7503.6
Inlet Vacuum (IWC)	42	60
Inlet Flow from Rotameter (SCFM)	78	*
Exhaust Vacuum (IWC)	-72	-64
Inlet PID	*	956.8
Exhaust PID	1522	136
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)		

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		7.05	
SVE-8		37.43	
9		7.07	

Zone B - Tertiary Impacts

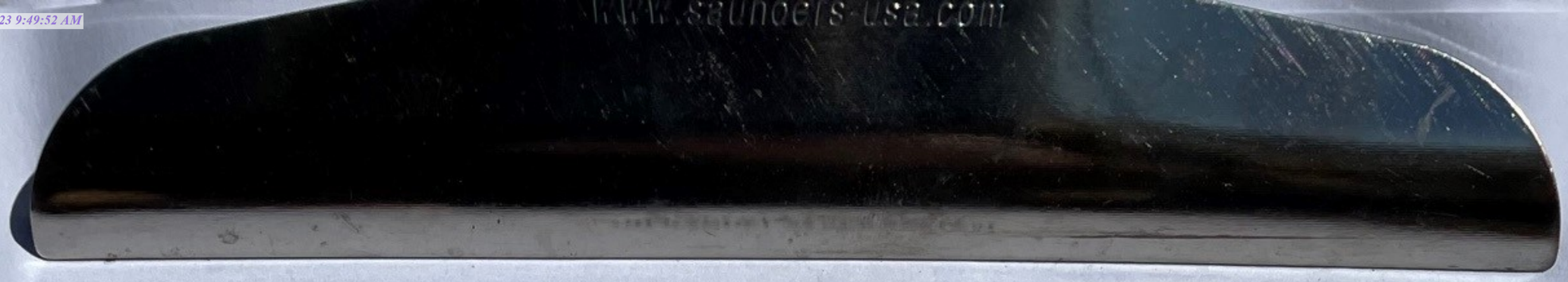
LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		60.74	
SVE-10		93.65	
SVE-11			
SVE-12		1743	
SVE-13		1453	
SVE-14		1150	
SVE-15		582.3	
SVE-16		1790	
SVE-17		552.8	
SVE-18		154.2	
SVE-19		1406	
SVE-20		719.4	
SVE-21		118.9	
SVE-22		765.2	

COMMENTS/OTHER MAINTENANCE:

Replaced SVE-5 well cap
SVE-7
SVE-19

* Rotameter stuck at top of site tube.

☆ No suction at valve, likely due to ice.



OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 2-2-23
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:		KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	39959.12	7859.6
Inlet Vacuum (IWC)	70	58
Inlet Flow from Rotameter (SCFM)	67	
Exhaust Vacuum (IWC)	-56	-66
Inlet PID	33.13	686.6
Exhaust PID	41.83	985.1
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)		

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		14.81	
SVE-8		84.23	
9		1098	

Zone B - Tertiary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		176.3	
SVE-10		239.4	
SVE-11			
SVE-12		592.5	
SVE-13		1429	
SVE-14		1261	
SVE-15		60.5	
SVE-16		1627	
SVE-17		376	
SVE-18		1417	
SVE-19		1625	
SVE-20		867.6	
SVE-21		136.8	
SVE-22		658	

COMMENTS/OTHER MAINTENANCE:

Location JH Randel #5 Date 2-2-23

Project / Client HEC

EC

11:00 EC on Site to replace rotometer

Rotometer @ blower 2 stuck
Plastic bottom broke
replace rotometer and
turn blower on.

15 minutes of running to
stabalize flow

flow rate 66 SCFM

Small leak in weld of 20D
near manifold.

EC off - Site

EC

OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 2-20-23
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	40392.76	8292.7
Inlet Vacuum (IWC)	48	54
Inlet Flow from Rotameter (SCFM)	73	64
Exhaust Vacuum (IWC)	-53	-65
Inlet PID	50.9	1607
Exhaust PID	71.2	2778
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)	6	20

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		30.2	
SVE-8		1393	
9		877.6	

Zone B - Tertiary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		242.8	
SVE-10		289.4	
SVE-11			
SVE-12		691.9	
SVE-13		2426	
SVE-14		1742	
SVE-15		1219	
SVE-16		2313	
SVE-17		590.7	
SVE-18		2915	
SVE-19		3156	
SVE-20		1873	
SVE-21		184.6	
SVE-22		682.9	

COMMENTS/OTHER MAINTENANCE:

35

Location OH Randel 5 Date 3-3-23

Project / Client Hilcorp

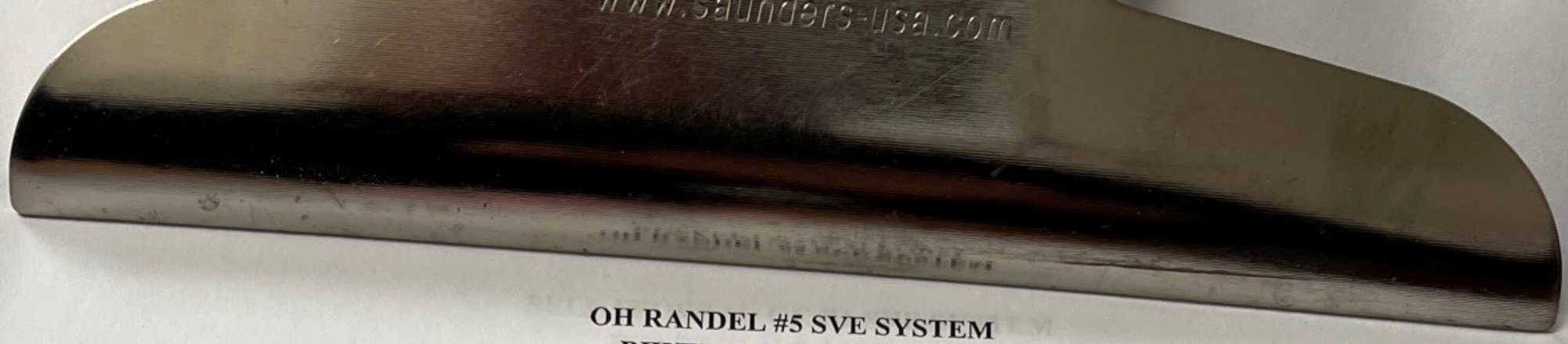
On site for 20D Repair
close valve apply silicon & Tape
and allow to dry

SVE Skid 1
Hours: 40655.96
Flow: 72 SCFM
PID: 62.9
Vac: 56 IWC

SVE Skid 2
Hours: 8556.1
Flow: 64 SCFM
Vac: 66 IWC
PID: 1687

Silicon dry spray water to see if leak has stopped. NO leak detected. Tape over weld & Silicon

Rite in the Rain



OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 3-10
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	40824.08	8724.2
Inlet Vacuum (IWC)	49	56
Inlet Flow from Rotameter (SCFM)	73	58
Exhaust Vacuum (IWC)	-54	-66
Inlet PID	87.3	841.2
Exhaust PID	71.7	1790
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)		

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		18.4	
SVE-8		958	
9		119.9	

Zone B - Tertiary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		330.4	
SVE-10		138.4	
SVE-11			
SVE-12		171.1	
SVE-13		2898	
SVE-14		1513	
SVE-15		983.2	
SVE-16		2077	
SVE-17		439.4	
SVE-18		2015	
SVE-19		3587	
SVE-20		1715	
SVE-21		124.3	
SVE-22		258.9	

COMMENTS/OTHER MAINTENANCE:

OH RANDEL #5 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 3-22
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:	KO TANK HIGH LEVEL

SVE SYSTEM	Skid 1	Skid 2
Blower Hours (take photo)	41101.46	9007.1
Inlet Vacuum (IWC)	51	56
Inlet Flow from Rotameter (SCFM)	73	59
Exhaust Vacuum (IWC)	-55	-64
Inlet PID	61.6	1384
Exhaust PID	65.5	2001
K/O Tank Liquid Level		
K/O Liquid Drained (gallons)		

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:

Zone A - Secondary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-5		6.9	
SVE-8		941	
9		56	

Zone B - Tertiary Impacts

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE-6			
SVE-7		86	
SVE-10		101.5	
SVE-11			
SVE-12		194.9	
SVE-13		1853	
SVE-14		1999	
SVE-15		356.6	
SVE-16		1994	
SVE-17		983.8	
SVE-18		2173	
SVE-19		3468	
SVE-20		1308	
SVE-21		75.8	
SVE-22		335.3	

COMMENTS/OTHER MAINTENANCE:

ENSOLUM

APPENDIX B

Project Photographs

PROJECT PHOTOGRAPHS
OH Randel #5
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1 Runtime meter taken on December 7, 2022 from SVE Skid 1 (original SVE system) at 3:53 PM Hours = 38,598.33		
Photograph 2 Runtime meter taken on December 7, 2022 from SVE Skid 2 (new SVE system) at 3:53 PM Hours = 6,507.2		

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

PROJECT PHOTOGRAPHS
OH Randel #5
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 3 Runtime meter taken on March 10, 2023 from SVE Skid 1 (original SVE system) at 11:10 AM Hours = 40,824.08		
Photograph 4 Runtime meter taken on March 10, 2023 from SVE Skid 2 (new SVE system) at 11:11 AM Hours = 8,724.2		

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

ENSOLUM

APPENDIX C

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 27, 2023

Kate Kaufman

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

RE: O H Randel 5 OrderNo.: 2303647

Dear Kate Kaufman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/11/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2303647**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: Skid 1
Project: O H Randel 5
Collection Date: 3/10/2023 11:00:00 AM
Lab ID: 2303647-001 **Matrix:** AIR **Received Date:** 3/11/2023 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	260	50		µg/L	10	3/21/2023 12:45:00 PM	GW9545
Surr: BFB	113	15-380		%Rec	10	3/21/2023 12:45:00 PM	GW9545
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	2.5	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Toluene	8.2	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Ethylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2,4-Trimethylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,3,5-Trimethylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Naphthalene	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1-Methylnaphthalene	ND	4.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
2-Methylnaphthalene	ND	4.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Acetone	ND	10		µg/L	10	3/21/2023 10:40:00 AM	R95406
Bromobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Bromodichloromethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Bromoform	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Bromomethane	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
2-Butanone	ND	10		µg/L	10	3/21/2023 10:40:00 AM	R95406
Carbon disulfide	ND	10		µg/L	10	3/21/2023 10:40:00 AM	R95406
Carbon tetrachloride	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Chlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Chloroethane	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Chloroform	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Chloromethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
2-Chlorotoluene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
4-Chlorotoluene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
cis-1,2-DCE	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
cis-1,3-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Dibromochloromethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Dibromomethane	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,3-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,4-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Dichlorodifluoromethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1-Dichloroethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1-Dichloroethene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406

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

Qualifiers:

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

Analytical Report
Lab Order **2303647**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: Skid 1
Project: O H Randel 5
Collection Date: 3/10/2023 11:00:00 AM
Lab ID: 2303647-001 **Matrix:** AIR **Received Date:** 3/11/2023 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,3-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
2,2-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Hexachlorobutadiene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
2-Hexanone	ND	10		µg/L	10	3/21/2023 10:40:00 AM	R95406
Isopropylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
4-Isopropyltoluene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
4-Methyl-2-pentanone	ND	10		µg/L	10	3/21/2023 10:40:00 AM	R95406
Methylene chloride	ND	3.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
n-Butylbenzene	ND	3.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
n-Propylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
sec-Butylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Styrene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
tert-Butylbenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Tetrachloroethene (PCE)	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
trans-1,2-DCE	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
trans-1,3-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2,3-Trichlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2,4-Trichlorobenzene	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1,1-Trichloroethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,1,2-Trichloroethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Trichloroethene (TCE)	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Trichlorofluoromethane	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
1,2,3-Trichloropropane	ND	2.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Vinyl chloride	ND	1.0		µg/L	10	3/21/2023 10:40:00 AM	R95406
Xylenes, Total	4.2	1.5		µg/L	10	3/21/2023 10:40:00 AM	R95406
Surr: Dibromofluoromethane	101	70-130		%Rec	10	3/21/2023 10:40:00 AM	R95406
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	10	3/21/2023 10:40:00 AM	R95406
Surr: Toluene-d8	102	70-130		%Rec	10	3/21/2023 10:40:00 AM	R95406
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	10	3/21/2023 10:40:00 AM	R95406

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

Qualifiers:

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

Analytical Report
Lab Order **2303647**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Project: O H Randel 5
Lab ID: 2303647-002 **Matrix:** AIR

Client Sample ID: Skid 2
Collection Date: 3/10/2023 11:20:00 AM
Received Date: 3/11/2023 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	12000	250		µg/L	50	3/21/2023 3:17:00 PM	GW9545
Surr: BFB	115	15-380		%Rec	50	3/21/2023 3:17:00 PM	GW9545
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	140	5.0		µg/L	50	3/21/2023 4:44:00 PM	R95425
Toluene	230	5.0		µg/L	50	3/21/2023 4:44:00 PM	R95425
Ethylbenzene	7.5	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2,4-Trimethylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,3,5-Trimethylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Naphthalene	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1-Methylnaphthalene	ND	4.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
2-Methylnaphthalene	ND	4.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Acetone	ND	10		µg/L	10	3/21/2023 11:02:00 AM	R95406
Bromobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Bromodichloromethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Bromoform	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Bromomethane	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
2-Butanone	ND	10		µg/L	10	3/21/2023 11:02:00 AM	R95406
Carbon disulfide	ND	10		µg/L	10	3/21/2023 11:02:00 AM	R95406
Carbon tetrachloride	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Chlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Chloroethane	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Chloroform	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Chloromethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
2-Chlorotoluene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
4-Chlorotoluene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
cis-1,2-DCE	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
cis-1,3-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Dibromochloromethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Dibromomethane	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,3-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,4-Dichlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Dichlorodifluoromethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1-Dichloroethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1-Dichloroethene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406

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

Qualifiers:

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

Analytical Report
Lab Order **2303647**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: Skid 2
Project: O H Randel 5
Collection Date: 3/10/2023 11:20:00 AM
Lab ID: 2303647-002 **Matrix:** AIR **Received Date:** 3/11/2023 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,3-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
2,2-Dichloropropane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Hexachlorobutadiene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
2-Hexanone	ND	10		µg/L	10	3/21/2023 11:02:00 AM	R95406
Isopropylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
4-Isopropyltoluene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
4-Methyl-2-pentanone	ND	10		µg/L	10	3/21/2023 11:02:00 AM	R95406
Methylene chloride	ND	3.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
n-Butylbenzene	ND	3.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
n-Propylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
sec-Butylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Styrene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
tert-Butylbenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Tetrachloroethene (PCE)	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
trans-1,2-DCE	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
trans-1,3-Dichloropropene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2,3-Trichlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2,4-Trichlorobenzene	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1,1-Trichloroethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,1,2-Trichloroethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Trichloroethene (TCE)	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Trichlorofluoromethane	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
1,2,3-Trichloropropane	ND	2.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Vinyl chloride	ND	1.0		µg/L	10	3/21/2023 11:02:00 AM	R95406
Xylenes, Total	60	1.5		µg/L	10	3/21/2023 11:02:00 AM	R95406
Surr: Dibromofluoromethane	106	70-130		%Rec	10	3/21/2023 11:02:00 AM	R95406
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	10	3/21/2023 11:02:00 AM	R95406
Surr: Toluene-d8	122	70-130		%Rec	10	3/21/2023 11:02:00 AM	R95406
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	10	3/21/2023 11:02:00 AM	R95406

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

Qualifiers:

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

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

ANALYTICAL SUMMARY REPORT

March 24, 2023

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

Work Order: B23030913 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 2 samples for Hall Environmental on 3/14/2023 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B23030913-001	2303647-001B, Skid 1	03/10/23 11:00	03/14/23	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60
B23030913-002	2303647-002B, Skid 2	03/10/23 11:20	03/14/23	Air	Same As Above

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

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

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

Report Approved By:

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B23030913-001
Client Sample ID: 2303647-001B, Skid 1

Report Date: 03/24/23
Collection Date: 03/10/23 11:00
DateReceived: 03/14/23
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.85	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Nitrogen	77.98	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Carbon Dioxide	0.06	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Methane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Hexanes plus	0.12	Mol %		0.01		GPA 2261-95	03/15/23 11:33 / ikc
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
Hexanes plus	0.051	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
GPM Total	0.051	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
GPM Pentanes plus	0.051	gpm		0.001		GPA 2261-95	03/15/23 11:33 / ikc
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	6			1		GPA 2261-95	03/15/23 11:33 / ikc
Net BTU per cu ft @ std cond. (LHV)	5			1		GPA 2261-95	03/15/23 11:33 / ikc
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	03/15/23 11:33 / ikc
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	03/15/23 11:33 / ikc
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	03/15/23 11:33 / ikc
Air, %	99.81			0.01		GPA 2261-95	03/15/23 11:33 / ikc
- The analysis was not corrected for air.							
COMMENTS							
-						-	03/15/23 11:33 / ikc

- 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)

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B23030913-002
Client Sample ID: 2303647-002B, Skid 2

Report Date: 03/24/23
Collection Date: 03/10/23 11:20
DateReceived: 03/14/23
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.71	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Nitrogen	77.78	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Carbon Dioxide	0.17	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Methane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Hexanes plus	0.34	Mol %		0.01		GPA 2261-95	03/15/23 12:06 / ikc
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
Hexanes plus	0.143	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
GPM Total	0.143	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
GPM Pentanes plus	0.143	gpm		0.001		GPA 2261-95	03/15/23 12:06 / ikc
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	16			1		GPA 2261-95	03/15/23 12:06 / ikc
Net BTU per cu ft @ std cond. (LHV)	15			1		GPA 2261-95	03/15/23 12:06 / ikc
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	03/15/23 12:06 / ikc
Pseudo-critical Temperature, deg R	241			1		GPA 2261-95	03/15/23 12:06 / ikc
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	03/15/23 12:06 / ikc
Air, %	99.18			0.01		GPA 2261-95	03/15/23 12:06 / ikc
- The analysis was not corrected for air.							
COMMENTS							
-						-	03/15/23 12:06 / ikc

- 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)

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B23030913 **Report Date:** 03/24/23

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R398983
Lab ID: **B23030934-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_230315A				03/15/23 12:58
Oxygen		21.2	Mol %	0.01				0	20	
Nitrogen		78.2	Mol %	0.01				0.0	20	
Carbon Dioxide		0.55	Mol %	0.01				0.0	20	
Hydrogen Sulfide		<0.01	Mol %	0.01					20	
Methane		<0.01	Mol %	0.01					20	
Ethane		<0.01	Mol %	0.01					20	
Propane		<0.01	Mol %	0.01					20	
Isobutane		<0.01	Mol %	0.01					20	
n-Butane		<0.01	Mol %	0.01					20	
Isopentane		<0.01	Mol %	0.01					20	
n-Pentane		<0.01	Mol %	0.01					20	
Hexanes plus		<0.01	Mol %	0.01					20	
Lab ID: **LCS031523**	11	Laboratory Control Sample				Run: GCNGA-B_230315A				03/15/23 13:25
Oxygen		0.61	Mol %	0.01	122	70	130			
Nitrogen		5.94	Mol %	0.01	99	70	130			
Carbon Dioxide		0.99	Mol %	0.01	100	70	130			
Methane		74.9	Mol %	0.01	100	70	130			
Ethane		5.95	Mol %	0.01	99	70	130			
Propane		4.94	Mol %	0.01	100	70	130			
Isobutane		1.95	Mol %	0.01	97	70	130			
n-Butane		1.95	Mol %	0.01	97	70	130			
Isopentane		0.99	Mol %	0.01	99	70	130			
n-Pentane		0.99	Mol %	0.01	99	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)

ENERGY LABORATORIES
Trust our People. Trust our Data.
www.energylab.com
Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Work Order Receipt Checklist

Hall Environmental

B23030913

Login completed by: Leslie S. Cadreau
Date Received: 3/14/2023
Reviewed by: gmccartney
Received by: tae
Reviewed Date: 3/17/2023
Carrier name: FedEx

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

Standard Reporting Procedures:

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

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

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

Contact and Corrective Action Comments:

None

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2303647-001B	Skid 1	TEDLAR	Air	3/10/2023 11:00:00 AM	1	Natrual Gas Analysis B23030913
2	2303647-002B	Skid 2	TEDLAR	Air	3/10/2023 11:20:00 AM	1	Natrual Gas Analysis

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 3/11/2023	Time: 10:55 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Gabriela Edwards	Date: 3.14.23	Time: 0745

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

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Hilcorp Energy | Work Order Number: 2303647 | RcptNo: 1

Received By: Cheyenne Cason 3/11/2023 10:00:00 AM

Completed By: Cheyenne Cason 3/11/2023 10:49:56 AM

Reviewed By: KPG 3.13.23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☐	NA ☑
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? _____

Checked by: yn 3/13/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: O H Randel #5

Project #:

Project Manager: Kate Kaufman

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No Yogi

# of Coolers: 1

Cooler Temp(Including CF): 4.1+0.2=4.3 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2303647	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 gases O_2&CO_2				
3-10	1100	air	Skid 1	2 Tedlar		001								✓			✓	✓				
3-10	1120	air	Skid 2	2 Tedlar		002								✓			✓	✓				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3-10	1436				3/10/23	1436
3/10/23	1809			Courier	3/11/23	1000

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.

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 207375

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	372171
	Action Number: 207375
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue with O & M schedule. 2. Submit next quarterly report by Jul 31, 2023.	5/11/2023