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December 29, 2023

REVIEWED
By Mike Buchanan at 3:44 pm, Mar 22, 2024

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

Review of the 4Q2023 Solar SVE System Update for Bell Federal GC B#1 Hilcorp: Content is satisfactory
1. Continue to perform O&M biweekly as scheduled and run system.
2. Submit the following quarterly SVE system update(s) at the end of each quarter in 2024.

Re: Fourth Quarter 2023 – Solar SVE System Update
Bell Federal GC B#1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS1729355513

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Fourth Quarter 2023 – Solar SVE System Update* report summarizing the solar soil vapor extraction (SVE) system performance at the Bell Federal GC B#1 natural gas production well (Site), located in Section 11, Township 30 North, Range 13 West in San Juan County, New Mexico (Figure 1). The SVE system has operated since January 16, 2018, to remediate subsurface soil impacts originating from a release of approximately 58 barrels (bbls) of natural gas condensate caused by an act of vandalism. This report summarizes Site activities performed in October, November, and December of 2023 to the New Mexico Oil Conservation Division (NMOCD).

SVE SYSTEM SPECIFICATIONS

Currently, a solar SVE system is operating at the Site, which consists of a 1/3-horsepower blower capable of producing 22 cubic feet per minute (cfm) flow at a vacuum of 29 inches of water column (IWC); three solar panels, with a total of 915 watts of maximum power output; and charged by four 12-volt deep cycle batteries that subsequently power the SVE blower. The system operation is controlled by a timer adjusted throughout the year based on available nominal daylight hours (generally nine hours per day during the winter and 14 hours per day during the summer). Four SVE wells (SVE01 through SVE04) are currently present at the Site as depicted on Figure 2.

FOURTH QUARTER 2023 ACTIVITIES

During the fourth 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. During Site visits, the system timer and the angle of the solar panels were adjusted to account for seasonal variations and maximize system efficiency. Field notes collected during O&M visits are presented in Appendix A.

During the fourth quarter of 2023, SVE wells SVE03 and SVE04 were operated to induce air flow in the impacted zones at the Site. Between September 28 and December 27, 2023, approximately 927 total hours of nominal daylight were available for the solar SVE system to operate. Available nominal daylight hours are based on estimates by the National Oceanic and Atmospheric Administration's (NOAA's)

National Weather Service (NWS) for the Site location. Between these dates, the actual runtime for the system was 923.0 hours, equating to a fourth quarter 2023 runtime efficiency of 99.6 percent (%). Table 1 presents the SVE system runtime compared to nominal available daylight hours per month. Appendix B presents photographs of the runtime meter for calculating the fourth quarter runtime efficiency.

A fourth quarter 2023 emissions sample was collected on November 20, 2023, from a sample port located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the emission sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The emission sample was collected directly into two 1-Liter Tedlar® bags and analyzed by Hall Environmental Analysis Laboratory for analysis of total volatile petroleum hydrocarbons (TVPH – also known as total petroleum hydrocarbons – gasoline range organics (TPH-GRO)) by Environmental Protection Agency (EPA) Method 8015D and volatile organic compounds (VOCs) following EPA Method 8260B, as well as fixed gas analysis of oxygen and carbon dioxide following American Society for Testing and Materials (ASTM) Method D-1946. Table 2 presents a summary of analytical data collected during this sampling event and historical sampling events, with the full laboratory analytical report included in Appendix C. Air sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 3). Based on these estimates, 48,180 pounds (24 tons) of TVPH have been removed by the system to date.

RECOMMENDATIONS

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

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

Sincerely,
Ensolum, LLC

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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 Emissions 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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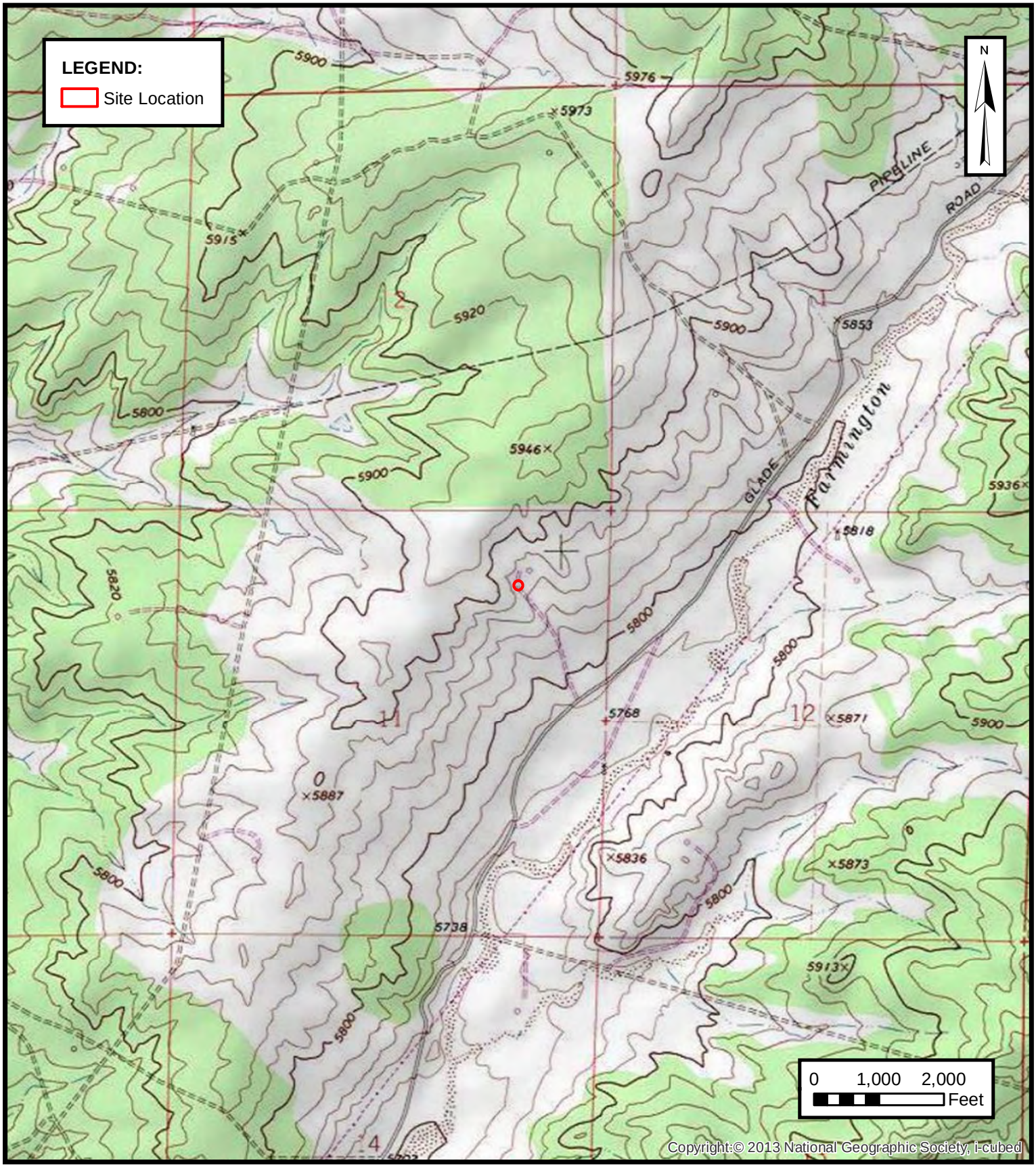
FIGURES



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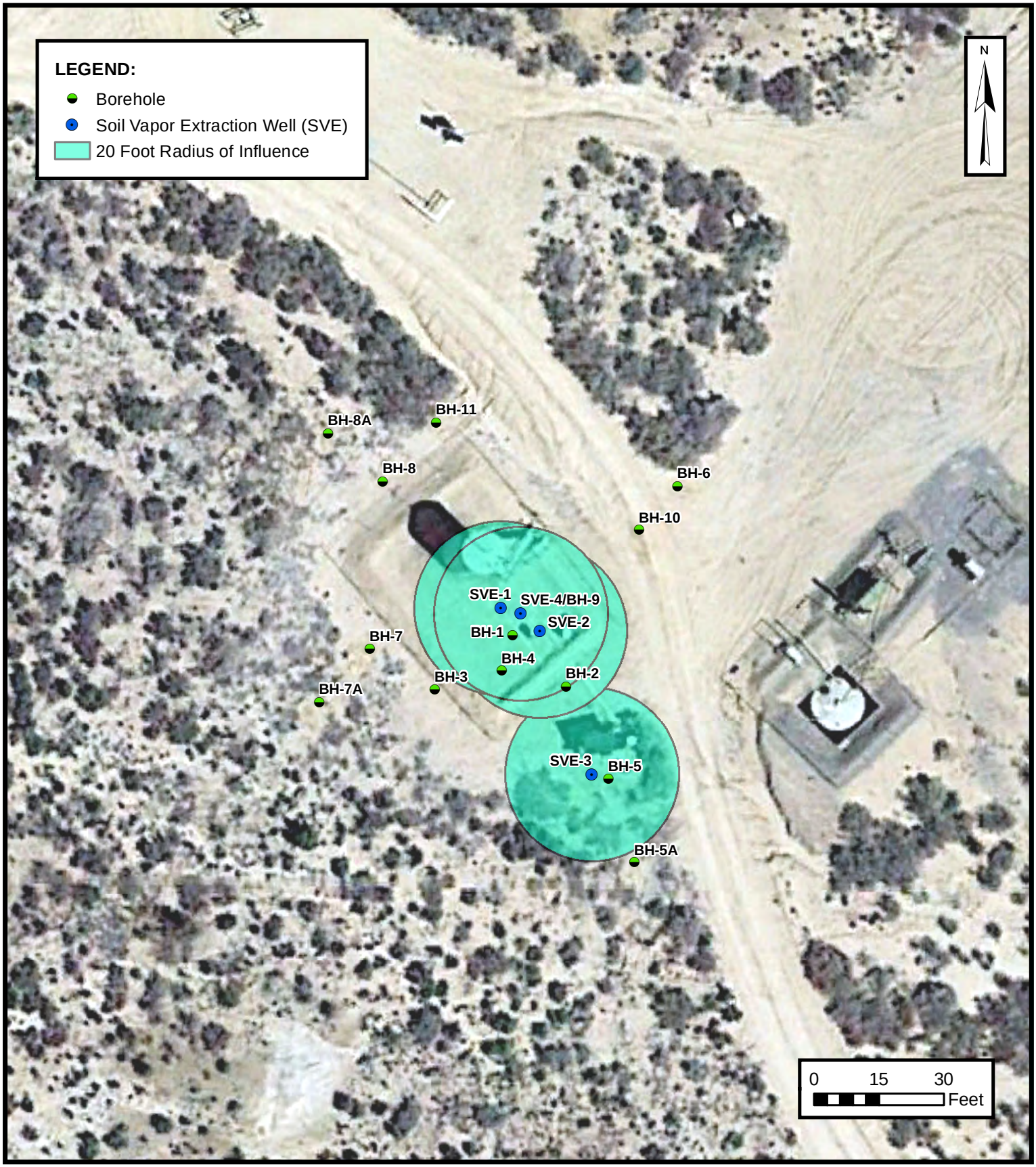
Environmental & Hydrogeologic Consultants

SITE LOCATION

HILCORP ENERGY COMPANY
BELL FEDERAL GC B#1
San Juan County, New Mexico
36.832426° N, 108.167760° W

PROJECT NUMBER: 07A1988001

FIGURE
1



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Environmental & Hydrogeologic Consultants

SVE SYSTEM CONFIGURATION

HILCORP ENERGY COMPANY
BELL FEDERAL GC B#1
San Juan County, New Mexico
36.832426° N, 108.167760° W

PROJECT NUMBER: 07A1988001

FIGURE
2

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TABLES

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TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
Bell Federal GC B#1
Hilcorp Energy Company
San Juan County, New Mexico

Date	Total Operational Hours	Delta Hours
9/28/2023	22,177.1	---
12/27/2023	23,100.1	923.0

Time Period	September 29 to September 30, 2023	October 1 to October 31, 2023	November 1 to November 30, 2023	December 1 to December 27, 2023
Days	2	31	31	28
Avg. Nominal Daylight Hours	12	11	10	9
Available Runtime Hours	24	341	310	252

Quarterly Available Daylight Runtime Hours	**927**
Quarterly Runtime Hours	**923.0**
Quarterly % Runtime	**99.6%**

Month	Days	Nominal Daylight Hours	Total Month Hours
January	31	10	310
February	28	10	280
March	31	11	341
April	30	12	360
May	31	13	403
June	30	14	420
July	31	14	434
August	31	13	403
September	30	12	360
October	31	11	341
November	30	10	300
December	31	9	279

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM EMISSIONS ANALYTICAL RESULTS
Bell Federal GC B#1
Hilcorp Energy Company
San Juan County, New Mexico

Date	Inlet PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
1/24/2018	1,435	280	200	<5.0	38.0	30,000	--	--
8/17/2018	1,873	160	380	21.0	320	18,000	--	--
3/22/2019	1,607	490	920	24.0	480	NA	--	--
6/18/2019	1,026	72.0	270	27.0	290	NA	--	--
9/25/2019	1,762	220	480	21.0	440	35,000	--	--
12/16/2019	1,902	130	840	21.0	220	22,000	--	--
3/10/2020	1,171	120	380	19.0	330	31,000	--	--
6/25/2020	978.0	180	430	25.0	480	45,000	--	--
9/16/2020	1,766	186	433	18.0	497	32,100	18.2%	3.29%
12/8/2020	1,741	114	292	10.6	324	16,000	17.3%	4.45%
3/23/2021	1,252	45	86.3	2.3	95.4	7,930	20.2%	<0.500%
6/10/2021	165.8	8.5	20	<0.50	20.0	5,700	17.3%	2.21%
9/8/2021	NM	130	240	5.9	150	33,000	--	--
12/15/2021	1,374	95	160	11.0	220	24,098	16.32%	3.32%
3/16/2022	1,096	53	120	<0.50	82	26,000	16.80%	3.01%
6/16/2022	708	24	69	<5.0	38	13,000	21.01%	0.82%
9/8/2022	545	50.2	129	4.99	612	10,500	17.70%	2.80%
12/7/2022	675	52	74	<5.00	35	13,000	16.98%	3.68%
3/9/2023	1,285	54	120	<2.5	54	15,000	16.88%	4.03%
6/23/2023	1,109	27	55	<2.5	38	13,000	17.03%	3.63%
8/24/2023	1,290	25	60	<5.0	38	9,600	16.74%	3.62%
11/20/2023	739.8	35	83	<2.5	40	9,500	18.18%	2.89%

Notes:

GRO: gasoline range hydrocarbons
µg/L: microgram per liter
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
%: percent
--: not sampled
<: gray indicates result less than the stated laboratory reporting limit (RL)

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TABLE 3
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Bell Federal GC B#1
Hilcorp Energy Company
San Juan County, New Mexico

Laboratory Analysis

Date	Inlet PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
1/24/2018	1,435	280	200	*5.0*	38	30,000
8/17/2018	1,873	160	380	21	320	18,000
3/22/2019	1,607	490	920	24	480	--
6/18/2019	1,026	72	270	27	290	--
9/25/2019	1,762	220	480	21	440	35,000
12/16/2019	1,902	130	840	21	220	22,000
3/10/2020	1,171	120	380	19	330	31,000
6/25/2020	978	180	430	25	480	45,000
9/16/2020	1,766	186	433	18	497	32,100
12/8/2020	1,741	114	292	11	324	16,000
3/23/2021	1,252	45	86	2	95	7,930
6/10/2021	166	9	20	*0.50*	20	5,700
9/8/2021	--	130	240	6	150	33,000
12/15/2021	1,374	95	160	11	220	24,098
3/16/2022	1,096	53	120	*0.50*	82	26,000
6/16/2022	708	24	69	*5.0*	38	13,000
9/8/2022	545	50	129	4.99	612	10,500
12/7/2022	675	52	74	*5.0*	35	13,000
3/9/2023	1,285	54	120	*2.5*	54	15,000
6/23/2023	1,109	27	55	*2.5*	38	13,000
8/24/2023	1,290	25	60	*5.0*	38	9,600
11/20/2023	740	35	83	*2.5*	40	9,500
Average	1,214	116	266	11	220	20,471

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)
1/24/2018	40	164,400	164,400	0.042	0.030	0.001	0.0057	4.5
8/17/2018	33	5,240,130	5,075,730	0.027	0.036	0.0016	0.022	3.0
3/22/2019	32	9,176,130	3,936,000	0.039	0.078	0.0027	0.048	--
6/18/2019	32	11,096,130	1,920,000	0.034	0.071	0.0031	0.046	--
9/25/2019	33	13,610,730	2,514,600	0.018	0.046	0.0030	0.045	3.3
12/16/2019	32	15,513,450	1,902,720	0.021	0.079	0.0025	0.039	3.4
3/10/2020	29	17,246,490	1,733,040	0.014	0.066	0.0022	0.030	2.9
6/25/2020	29	19,123,950	1,877,460	0.016	0.044	0.0024	0.044	4.1
9/16/2020	31	20,825,850	1,701,900	0.021	0.050	0.0025	0.057	4.5
12/8/2020	30	22,049,850	1,224,000	0.017	0.041	0.0016	0.046	2.7
3/23/2021	30	23,122,650	1,072,800	0.0089	0.021	0.00073	0.024	1.3
6/10/2021	33	23,514,690	392,040	0.0033	0.0066	0.00017	0.0071	0.84
9/8/2021	33	23,831,490	316,800	0.0085	0.0160	0.00039	0.010	2.4
12/15/2021	33	26,136,210	2,304,720	0.014	0.025	0.0010	0.023	3.5
3/16/2022	33	27,701,202	1,564,992	0.0091	0.017	0.00071	0.019	3.1
6/16/2022	25	29,520,102	1,818,900	0.0036	0.009	0.00026	0.0056	1.8
9/8/2022	31	31,835,244	2,315,142	0.0043	0.011	0.00058	0.038	1.4
12/7/2022	29	34,162,320	2,327,076	0.0055	0.011	0.00054	0.035	1.3
3/9/2023	29	36,239,184	2,076,864	0.0057	0.011	0.00041	0.0048	1.5
6/23/2023	29	38,718,336	2,479,152	0.0044	0.0095	0.00027	0.0050	1.5
8/24/2023	29	40,107,552	1,389,216	0.0028	0.0062	0.0004	0.0041	1.2256
11/20/2023	28	41,872,560	1,765,008	0.0031	0.0075	0.0004	0.0041	1.0001
			Average	0.015	0.031	0.001	0.026	2.5

Mass Recovery

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
1/24/2018	69	69	2.9	2.0	0.051	0.39	307	0.15
8/17/2018	2,632	2,564	70	92	4.1	57	7,593	3.8
3/22/2019	4,682	2,050	80	159	5.5	98	--	--
6/18/2019	5,682	1,000	33.6	71	3.1	46	--	--
9/25/2019	6,952	1,270	23	59	3.8	57	4,154	2.1
12/16/2019	7,943	991	21	78	2.5	39	3,380	1.7
3/10/2020	8,939	996	14	66	2.2	30	2,863	1.4
6/25/2020	10,018	1,079	18	47	2.6	47	4,447	2.2
9/16/2020	10,933	915	19	46	2.3	52	4,090	2.0
12/8/2020	11,613	680	11.4	28	1.1	31	1,835	0.92
3/23/2021	12,209	596	5.3	12.6	0.43	14.0	800	0.40
6/10/2021	12,407	198	0.66	1.30	0.035	1.41	167	0.083
9/8/2021	12,567	160	1.4	2.6	0.06	1.7	382	0.19
12/15/2021	13,731	1,164	16	29	1.2	27	4,101	2.1
3/16/2022	14,521	790	7.2	14	0.561	14.7	2,444	1.2
6/16/2022	15,734	1,213	4.4	11	0.31	6.8	2,211	1.1
9/8/2022	16,979	1,245	5.4	14	0.72	46.9	1,696	0.8
12/7/2022	18,316	1,337	7.4	15	0.72	46.9	1,704	0.9
3/9/2023	19,510	1,194	6.9	13	0.49	5.8	1,812	0.9
6/23/2023	20,935	1,425	6.3	14	0.39	7.1	2,164	1.1
8/24/2023	21,733	798	2.3	5.0	0.32	3.3	979	0.49
11/20/2023	22,784	1,051	3.3	7.9	0.41	4.3	1,051	0.53
		Total Mass Recovery to Date	358	786	33	637	48,180	24

Notes:

cf: cubic feet
cfm: cubic feet per minute
µg/L: micrograms per liter
lb/hr: pounds per hour
--: not sampled
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons
gray: laboratory reporting limit used for calculating emissions

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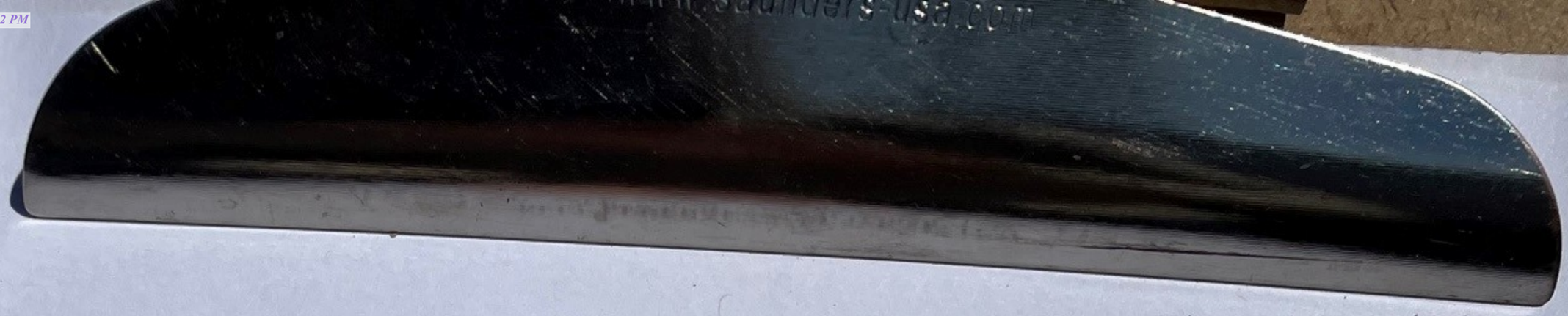
APPENDIX A

Field Notes



BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 10-14
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)**	22369.1	1212
Pre K/O Vacuum (IWC)	21	
Thermal Anemometer Flow (fpm)	318.9	
Thermal Anemometer Temp (C)	28.95	
Inlet PID	1062	
Exhaust PID	970.9	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		952.7	
SVE04		1944	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 10-27 O&M PERSONNEL: B Sinclair
TIME ONSITE: _____ TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	22526.1	1016
Pre K/O Vacuum (IWC)	21	
Thermal Anemometer Flow (fpm)	965.3	
Thermal Anemometer Temp (C)	26.65	
Inlet PID	1503	
Exhaust PID	1634	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		1483	
SVE04		1895	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

Bailed ½ gal of LNAPL from MW-3.

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 11-13
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)**	22725.5	1340
Pre K/O Vacuum (IWC)	22	
Thermal Anemometer Flow (fpm)	955.2	
Thermal Anemometer Temp (C)	20.95	
Inlet PID	738.4	
Exhaust PID	1145	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		732.1	
SVE04		1652	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 11-20 O&M PERSONNEL: B Sinclair
TIME ONSITE: _____ TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:		KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours **(take photo)**	22783.5	1144
Pre K/O Vacuum (IWC)	22	
Thermal Anemometer Flow (fpm)	834.9	
Thermal Anemometer Temp (C)	20.85	
Inlet PID	739.8	
Exhaust PID	1224	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		721.4	
SVE04		1780	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 12-11
TIME ONSITE:

O&M PERSONNEL: B Sinclair
TIME OFFSITE:

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: | KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	22980.1	1424
Pre K/O Vacuum (IWC)	21	
Thermal Anemometer Flow (fpm)	834.2	
Thermal Anemometer Temp (C)	23.3	
Inlet PID	637.1	
Exhaust PID	981.3	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		789.9	
SVE04		1740	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM

DATE: 12-27 O&M PERSONNEL: B Sinclair
TIME ONSITE: _____ TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS:	KO TANK HIGH LEVEL

SVE SYSTEM	READING	TIME
Blower Hours (take photo)	23100.1	1353
Pre K/O Vacuum (IWC)	22	
Thermal Anemometer Flow (fpm)	1231	
Thermal Anemometer Temp (C)	12.45	
Inlet PID	857.6	
Exhaust PID	1165	
Solar Panel Angle		
K/O Tank Drum Level		
K/O Liquid Drained (gallons)		
Timer Setting		
Heat Trace (on/off)		

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			
SVE02			
SVE03		932.1	
SVE04		1535	

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	ECOVERED VOLUM	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

ENSOLUM

APPENDIX B

Project Photographs

PROJECT PHOTOGRAPHS
Bell Federal GC B#1
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1 Runtime meter taken on September 28, 2023 at 3:18 PM Hours = 22,177.1		
Photograph 2 Runtime meter taken on December 27, 2023 at 1:53 PM Hours = 23,100.1		

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

ENSOLUM

APPENDIX C

Laboratory Analytical Reports

eurofins | Environment Testing

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

December 08, 2023

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

RE: Bell Fed GC B1 OrderNo.: 2311A90

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 11/21/2023 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311A90**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: SVE-1
Project: Bell Fed GC B1
Collection Date: 11/20/2023 12:00:00 PM
Lab ID: 2311A90-001 **Matrix:** AIR
Received Date: 11/21/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
Benzene	35	2.5		µg/L	25	11/22/2023 4:24:00 PM
Toluene	83	2.5		µg/L	25	11/22/2023 4:24:00 PM
Ethylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2,4-Trimethylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,3,5-Trimethylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2-Dichloroethane (EDC)	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2-Dibromoethane (EDB)	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Naphthalene	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
1-Methylnaphthalene	ND	10		µg/L	25	11/22/2023 4:24:00 PM
2-Methylnaphthalene	ND	10		µg/L	25	11/22/2023 4:24:00 PM
Acetone	ND	25		µg/L	25	11/22/2023 4:24:00 PM
Bromobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Bromodichloromethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Bromoform	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Bromomethane	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
2-Butanone	ND	25		µg/L	25	11/22/2023 4:24:00 PM
Carbon disulfide	ND	25		µg/L	25	11/22/2023 4:24:00 PM
Carbon tetrachloride	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Chlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Chloroethane	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
Chloroform	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Chloromethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
2-Chlorotoluene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
4-Chlorotoluene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
cis-1,2-DCE	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
cis-1,3-Dichloropropene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
Dibromochloromethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Dibromomethane	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
1,2-Dichlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,3-Dichlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,4-Dichlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Dichlorodifluoromethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1-Dichloroethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1-Dichloroethene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2-Dichloropropane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,3-Dichloropropane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
2,2-Dichloropropane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311A90**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: SVE-1
Project: Bell Fed GC B1
Collection Date: 11/20/2023 12:00:00 PM
Lab ID: 2311A90-001 **Matrix:** AIR
Received Date: 11/21/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**
1,1-Dichloropropene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Hexachlorobutadiene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
2-Hexanone	ND	25		µg/L	25	11/22/2023 4:24:00 PM
Isopropylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
4-Isopropyltoluene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
4-Methyl-2-pentanone	ND	25		µg/L	25	11/22/2023 4:24:00 PM
Methylene chloride	ND	7.5		µg/L	25	11/22/2023 4:24:00 PM
n-Butylbenzene	ND	7.5		µg/L	25	11/22/2023 4:24:00 PM
n-Propylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
sec-Butylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Styrene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
tert-Butylbenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1,1,2-Tetrachloroethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1,2,2-Tetrachloroethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Tetrachloroethene (PCE)	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
trans-1,2-DCE	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
trans-1,3-Dichloropropene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2,3-Trichlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2,4-Trichlorobenzene	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1,1-Trichloroethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,1,2-Trichloroethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Trichloroethene (TCE)	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Trichlorofluoromethane	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
1,2,3-Trichloropropane	ND	5.0		µg/L	25	11/22/2023 4:24:00 PM
Vinyl chloride	ND	2.5		µg/L	25	11/22/2023 4:24:00 PM
Xylenes, Total	40	3.8		µg/L	25	11/22/2023 4:24:00 PM
Surr: Dibromofluoromethane	91.4	70-130		%Rec	25	11/22/2023 4:24:00 PM
Surr: 1,2-Dichloroethane-d4	88.8	70-130		%Rec	25	11/22/2023 4:24:00 PM
Surr: Toluene-d8	119	70-130		%Rec	25	11/22/2023 4:24:00 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	25	11/22/2023 4:24:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	9500	120		µg/L	25	11/22/2023 4:24:00 PM
Surr: BFB	98.8	70-130		%Rec	25	11/22/2023 4:24:00 PM

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

Qualifiers:

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

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ANALYTICAL SUMMARY REPORT

December 06, 2023

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

Work Order: B23111683 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 11/22/2023 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B23111683-001	2311A90-001B, SVE-1	11/20/23 12:00	11/22/23	Air	Air Correction Calculations Appearance and Comments Calculated Properties GPM @ std cond,/1000 cu. ft., moist. Free Natural Gas Analysis Specific Gravity @ 60/60

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

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

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

Report Approved By:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B23111683-001
Client Sample ID: 2311A90-001B, SVE-1

Report Date: 12/06/23
Collection Date: 11/20/23 12:00
DateReceived: 11/22/23
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	18.18	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Nitrogen	78.77	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Carbon Dioxide	2.89	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Hexanes plus	0.16	Mol %		0.01		GPA 2261-95	12/04/23 10:48 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
Hexanes plus	0.067	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
GPM Total	0.067	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
GPM Pentanes plus	0.067	gpm		0.001		GPA 2261-95	12/04/23 10:48 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	8			1		GPA 2261-95	12/04/23 10:48 / jrj
Net BTU per cu ft @ std cond. (LHV)	7			1		GPA 2261-95	12/04/23 10:48 / jrj
Pseudo-critical Pressure, psia	553			1		GPA 2261-95	12/04/23 10:48 / jrj
Pseudo-critical Temperature, deg R	247			1		GPA 2261-95	12/04/23 10:48 / jrj
Specific Gravity @ 60/60F	1.01			0.001		D3588-81	12/04/23 10:48 / jrj
Air, %	83.06			0.01		GPA 2261-95	12/04/23 10:48 / jrj
- The analysis was not corrected for air.							
COMMENTS							
-						-	12/04/23 10:48 / 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)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B23111683 **Report Date:** 12/06/23

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95										Batch: R413227
Lab ID: LCS120423	11	Laboratory Control Sample				Run: GCNGA-B_231204A				12/04/23 03:28
Oxygen		0.63	Mol %	0.01	126	70	130			
Nitrogen		7.07	Mol %	0.01	118	70	130			
Carbon Dioxide		0.97	Mol %	0.01	98	70	130			
Methane		74.3	Mol %	0.01	99	70	130			
Ethane		5.90	Mol %	0.01	98	70	130			
Propane		4.85	Mol %	0.01	98	70	130			
Isobutane		1.82	Mol %	0.01	91	70	130			
n-Butane		1.90	Mol %	0.01	95	70	130			
Isopentane		0.94	Mol %	0.01	94	70	130			
n-Pentane		0.94	Mol %	0.01	94	70	130			
Hexanes plus		0.72	Mol %	0.01	90	70	130			
Lab ID: B23111683-001ADUP	12	Sample Duplicate				Run: GCNGA-B_231204A				12/04/23 11:37
Oxygen		18.2	Mol %	0.01				0.3	20	
Nitrogen		78.8	Mol %	0.01				0	20	
Carbon Dioxide		2.86	Mol %	0.01				1.0	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		0.15	Mol %	0.01				6.5	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B23111683

Login completed by: Danielle N. Harris
Date Received: 11/22/2023
Reviewed by: lleprowse
Received by: cmj
Reviewed Date: 11/27/2023
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:	15.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

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

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

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

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

Contact and Corrective Action Comments:

None

eurofins | Environment Testing

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

B23111683

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	2311A90-001B	SVE-1	TEDLAR	Air	11/20/2023 12:00:00 PM	1	Natural Gas Analysis- CO2+02

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: 11/21/2023	Time: 9:54 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 11/22/23	Time: 0820

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

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

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

eurofins Environment Testing

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

Sample Log-In Check List

Client Name: HILCORP ENERGY   Work Order Number: 2311A90   RcptNo: 1

Received By: Juan Rojas   11/21/2023 7:10:00 AM

Completed By: Cheyenne Cason   11/21/2023 9:53:02 AM

Reviewed By: SCM 11/21/23

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 ☑~~ (per COC. JW 11/21/23)
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? Yes ☑ No ☐
(Note discrepancies on chain of custody)
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? Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ______
(<2 or >12 unless noted)
Adjusted? ______
Checked by: JW 11/21/23

Special Handling (if applicable)

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

Person Notified: ______ Date: ______
By Whom: ______ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ______
Client Instructions: Mailing address, phone number, and Email/Fax are missing on COC- TMC 11/17/23

16. Additional remarks:

17. Cooler Information

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

Chain-of-Custody Record

Client: Hilcorp

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: Bell Fed GC B1

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): ~~0.4+0.2=~~ N/A (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311A90	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			
11-20	1200	air	SVE-1	2 Tedlar		001								✓			✓	✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11-20	1650	[signature]	[signature]		11/20/23	1658
11/20/23	1800	[signature]	[signature]	courier	11/21/23	7:10

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 301152

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 301152
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 4Q2023 Solar SVE System Update for Bell Federal GC B#1 Hilcorp: Content is satisfactory 1. Continue to perform O&M biweekly as scheduled and run system. 2. Submit the following quarterly SVE system update(s) at the end of each quarter in 2024.	3/22/2024