

1. Continue with O & M schedule.
2. Submit next quarterly report by October 31, 2022.



July 11, 2022

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Second Quarter 2022 – Solar SVE System Update

Bell Federal GC B#1
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident Number: NCS1729355513
Ensolum Project No. 07A1988001

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Second Quarter 2022 – 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 April, May, and June of 2022 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 9 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.

SECOND QUARTER 2022 ACTIVITIES

During the second quarter of 2022, Ensolum, LLC (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.

Hilcorp Energy Company
Bell Federal GC B#1
July 11, 2022



During the second quarter of 2022, operating SVE wells were rotated so vacuum on the vadose zone within two wells at a time to induce air flow in the impacted zones at the Site. Between April 4 and June 16, 2022, approximately 951 total hours of available 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 989.6 hours, equating to a second quarter 2022 runtime efficiency of 104.1 percent (%). For solar SVE systems, runtime efficiency can be greater than 100% when the solar panels charge the system's batteries during daylight hours and continue to run the SVE blower for a longer duration of time than the nominal daylight hours available at the Site due to excess energy stored in the batteries. Table 1 presents the SVE system runtime compared to nominal available daylight hours per month. Appendix B presents photographs of the runtime meter taken during the first and last field visits of the quarter.

A second quarter 2022 emissions sample was collected on June 16, 2022 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 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 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, 38,774 pounds (19 tons) of TVPH have been removed by the system to date.

RECOMMENDATIONS

Bi-weekly operation and maintenance (O&M) visits will continue to be performed by Ensolum and/or Hilcorp personnel to verify that the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following quarterly report. Hilcorp will continue operating the SVE until asymptotic 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

A handwritten signature in black ink, appearing to read "SH", is positioned above the name Stuart Hyde.

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

A handwritten signature in black ink, appearing to read "DM", is positioned above the name Daniel R. Moir.

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

Hilcorp Energy Company
Bell Federal GC B#1
July 11, 2022

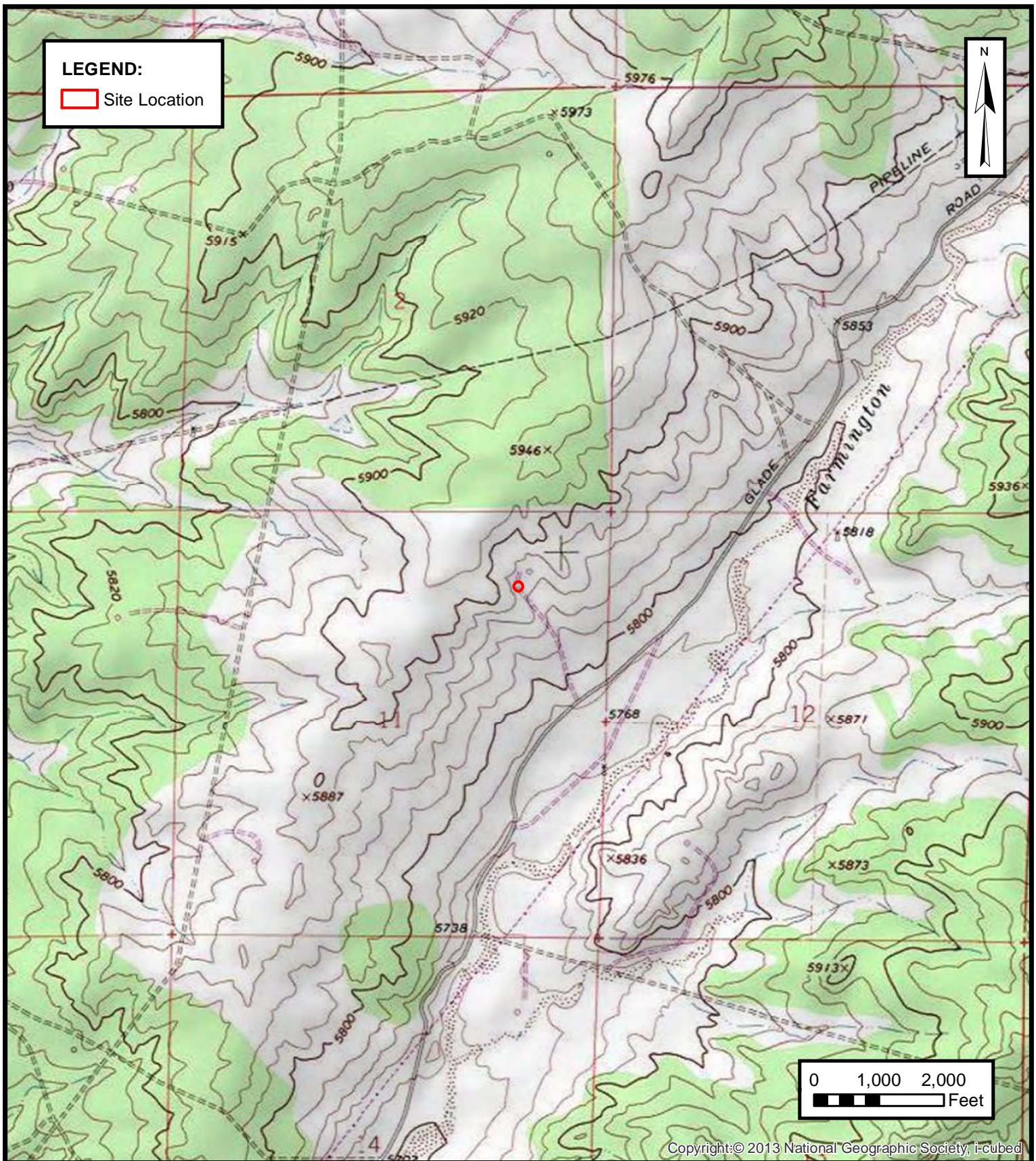


Attachments:

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



FIGURES



ENSOLUM
 Environmental & Hydrogeologic Consultants

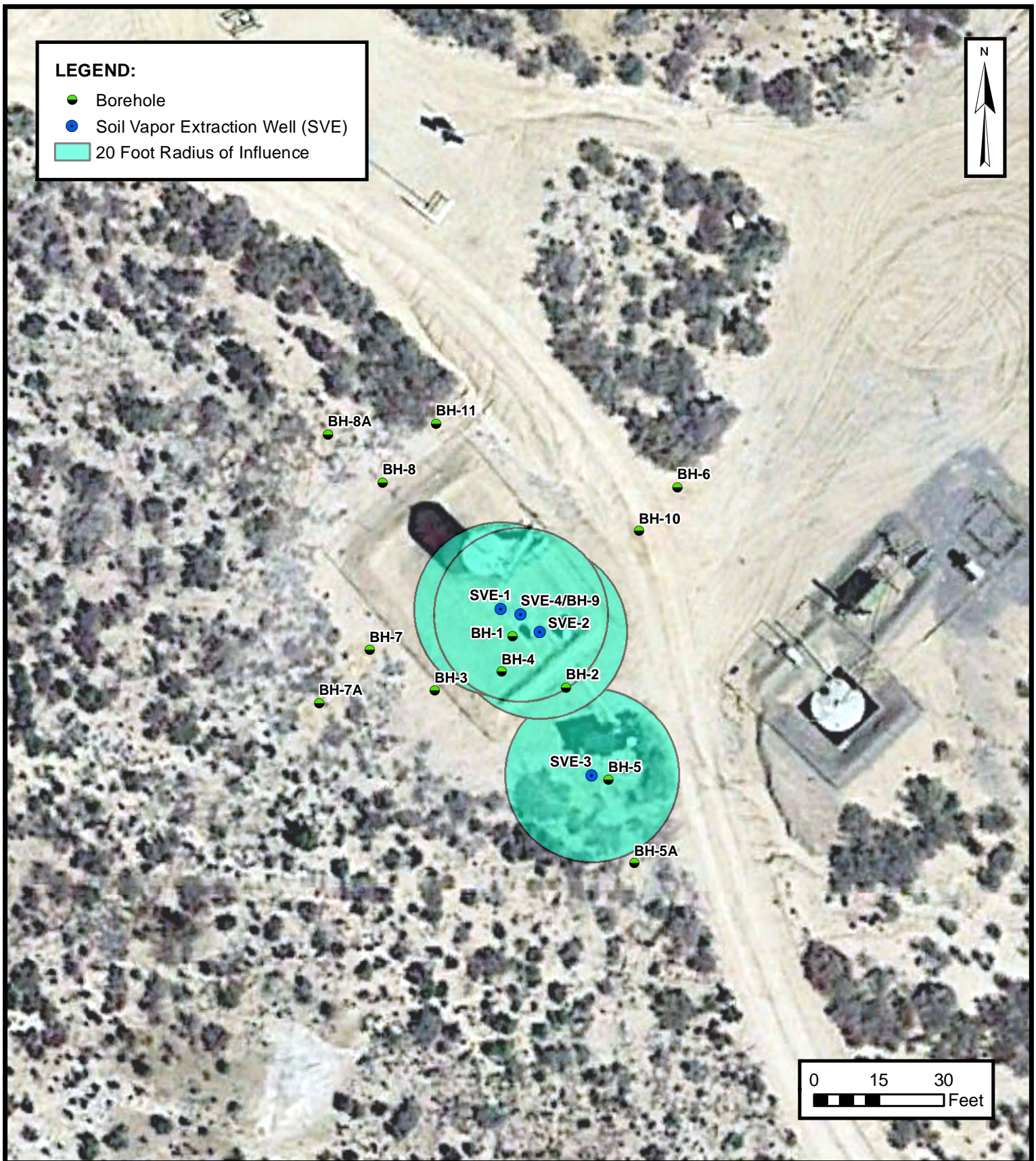
SITE LOCATION

HILCORP ENERGY COMPANY
 BELL FEDERAL GC B#1
 NENE SEC 11 T30N R13W, San Juan County, New Mexico
 36.893345° N, 107.899185° W

PROJECT NUMBER: 07A1988001

FIGURE

1



SVE SYSTEM CONFIGURATION

HILCORP ENERGY COMPANY
BELL FEDERAL GC B#1
NENE SEC 11 T30N R13W, San Juan County, New Mexico
36.893345° N, 107.899185° W

PROJECT NUMBER: 07A1988001

FIGURE
2



TABLES



TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS

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

Ensolum Project No. 07A1988001

Date	Total Operational Hours	Delta Hours
4/4/2022	14,744.2	---
6/16/2022	15,733.8	989.6

Time Period	April 4 to April 30, 2022	May 1 to May 31, 2022	June 1 to June 16, 2022
Days	27	31	16
Avg. Nominal Daylight Hours	12	13	14
Available Runtime Hours	324	403	224

Quarterly Available Daylight Runtime Hours 951

Quarterly Runtime Hours 989.6

Quarterly % Runtime 104.1%

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



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

Ensolum Project No. 07A1988001

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	16.3%	3.32%
3/16/2021	1,096	53	120	<0.50	82	26,000	16.8%	3.01%
6/16/2022	708	24	69	<5.0	38	13,000	21.0%	0.82%

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

<0.037: indicates result less than the stated laboratory reporting limit (RL)



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

Ensolum Project No. 07A1988001

Flow and 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
3/16/2021	1,096	53	120	0.50	82	26,000
6/16/2022	708	24	69	5.00	38	13,000
Average	1,324	144	333	14	252	24,202

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
3/16/2021	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
Average				0.018	0.040	0.0016	0.029	3.0

Flow and Laboratory Analysis

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
Total Mass Recovery to Date			327	718	30	523	38,774	19

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



APPENDIX A

Field Notes

**BELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORM**

DATE: 4/4/22
TIME ONSITE: 1018

O&M PERSONNEL: Reece Hanson
TIME OFFSITE: 1145

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: - KO TANK HIGH LEVEL -

			TIMER SETTINGS	
SVE SYSTEM	READING	TIME	Month	Timer Setting
Blower Hours (take photo)	<u>14744.2</u>	<u>1030</u>	January	8 AM to 7 PM
Pre K/O Vacuum (IWC)	<u>14</u>		February	8 AM to 7 PM
Thermal Anemometer Flow (fpm)	<u>4342</u>		March	8 AM to 8 PM
Thermal Anemometer Temp (°F)	<u>92° F</u>		April	8 AM to 9 PM
Inlet PID	<u>1651</u>		May	7 AM to 9 PM
Exhaust PID	<u>1920</u>		June	6 AM to 9 PM
Solar Panel Angle	<u>-</u>		July	6 AM to 9 PM
K/O Tank Drum Level	<u>6"</u>		August	7 AM to 9 PM
K/O Liquid Drained (gallons)	<u>-</u>		September	8 AM to 9 PM
Timer Setting	<u>8 AM to 8 PM</u>		October	8 AM to 8 PM
Heat Trace (on/off)			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	<u>SVE 1, 2, 3</u>

Change in Well Operation:

1 + 2

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03			
SVE04			

PRODUCT RECOVERY

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

COMMENTS/OTHER MAINTENANCE:

Change timer settings to 8 AM to 9 PM
Change active SVE wells to 2 & 3

SAUNDERS
www.saunders-usa.comBELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORMDATE: 4-19-22
TIME ONSITE: _____O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: _____
KO TANK HIGH LEVEL

SVE SYSTEM			TIMER SETTINGS	
	READING	TIME	Month	Timer Setting
Blower Hours (take photo)	14938.3	1020	January	8 AM to 7 PM
Pre K/O Vacuum (IWC)	16		February	8 AM to 7 PM
Thermal Anemometer Flow (fpm)	1266		March	8 AM to 8 PM
Thermal Anemometer Temp (C)	30.05		April	8 AM to 9 PM
Inlet PID	878		May	7 AM to 9 PM
Exhaust PID	737		June	6 AM to 9 PM
Solar Panel Angle			July	6 AM to 9 PM
K/O Tank Drum Level			August	7 AM to 9 PM
K/O Liquid Drained (gallons)			September	8 AM to 9 PM
Timer Setting			October	8 AM to 8 PM
Heat Trace (on/off)			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	2, 3

Change in Well Operation: _____

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE01	0 ft			
SVE02	83.8			
SVE03	1334			
SVE04	0 ft			

PRODUCT RECOVERY

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

COMMENTS/OTHER MAINTENANCE: _____

**BELL FEDERAL GC BI SVE SYSTEM
BIWEEKLY O&M FORM**

DATE: 5/5/22 O&M PERSONNEL: Reece Hanson
TIME ONSITE: 11:15 TIME OFFSITE: 12:17

SVE SYSTEM - MONTHLY O&M				
SVE ALARMS:			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	READING	TIME
Blower Hours (take photo)	<u>15146.5</u>	<u>1121</u>
Pre K/O Vacuum (IWC)	<u>18.5</u>	<u>1125</u>
Thermal Anemometer Flow (fpm)	<u>-</u>	
Thermal Anemometer Temp (C)	<u>-</u>	
Inlet PID	<u>944</u>	
Exhaust PID	<u>795</u>	
Solar Panel Angle	<u>-</u>	
K/O Tank Drum Level	<u>2.5 in.</u>	
K/O Liquid Drained (gallons)	<u>-</u>	
Timer Setting	<u>8 AM to 9 PM</u>	
Heat Trace (on/off)	<u>-</u>	

SVE SYSTEM - QUARTERLY SAMPLING	
SAMPLE ID:	SAMPLE TIME:
Analytes: TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	
OPERATING WELLS	<u>SVE-02, 03</u>

Change in Well Operation:			
<u>-</u>			

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03			
SVE04			

PRODUCT RECOVERY				
LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	RECOVERED VOLUME	COMMENTS
SVE-1				
SVE-2RS				
SVE-4				
SVE-11S				
SVE-13S				
SVE-14S				

COMMENTS/OTHER MAINTENANCE:

<u>Change timer setting to 7 AM to 9 PM</u>	<u>SVE03 - DTP DTW</u> <u>44.15 47.12</u>	<u>Bail ~ 76 02</u> <u>red PSH</u>
---	--	---------------------------------------

Reece

BELL FEDERAL GC B1 SVE SYSTEM BIWEEKLY O&M FORM

DATE: 5-16-22
TIME ONSITE: _____

O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: _____ KO TANK HIGH LEVEL _____

			TIMER SETTINGS	
			Month	Timer Setting
SVE SYSTEM	READING	TIME	January	8 AM to 7 PM
Blower Hours (take photo)	15301.1	12:32	February	8 AM to 7 PM
Pre K/O Vacuum (IWC)	16		March	8 AM to 8 PM
Thermal Anemometer Flow (fpm)	96.73		April	8 AM to 9 PM
Thermal Anemometer Temp (C)	40.15		May	7 AM to 9 PM
Inlet PID	815		June	6 AM to 9 PM
Exhaust PID	794		July	6 AM to 9 PM
Solar Panel Angle			August	7 AM to 9 PM
K/O Tank Drum Level			September	8 AM to 9 PM
K/O Liquid Drained (gallons)			October	8 AM to 8 PM
Timer Setting			November	9 AM to 8 PM
Heat Trace (on/off)			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	<u>SVE02, SVE03</u>

Change in Well Operation: _____

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE01				
SVE02		62.3		
SVE03		1338		
SVE04				

PRODUCT RECOVERY

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

COMMENTS/OTHER MAINTENANCE: _____

SAUNDERS
www.saunders-usa.comBELL FEDERAL GC B1 SVE SYSTEM
BIWEEKLY O&M FORMDATE: 6-2
TIME ONSITE: _____O&M PERSONNEL: B Sinclair
TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M

SVE ALARMS: _____ KO TANK HIGH LEVEL _____

			TIMER SETTINGS	
SVE SYSTEM	READING	TIME	Month	Timer Setting
Blower Hours (take photo)	15538.3	1230	January	8 AM to 7 PM
Pre K/O Vacuum (IWC)	16		February	8 AM to 7 PM
Thermal Anemometer Flow (fpm)	1263		March	8 AM to 8 PM
Thermal Anemometer Temp (C)	39.4		April	8 AM to 9 PM
Inlet PID	771		May	7 AM to 9 PM
Exhaust PID	618		June	6 AM to 9 PM
Solar Panel Angle			July	6 AM to 9 PM
K/O Tank Drum Level			August	7 AM to 9 PM
K/O Liquid Drained (gallons)			September	8 AM to 9 PM
Timer Setting			October	8 AM to 8 PM
Heat Trace (on/off)			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	SVE02, SVE03

Change in Well Operation: _____

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	FLOW (CFM)	ADJUSTMENTS
SVE01				
SVE02		73.0		
SVE03		1174		
SVE04				

PRODUCT RECOVERY

LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	RECOVERED 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: 6-16-22 O&M PERSONNEL: D. Burns
 TIME ONSITE: 1215 TIME OFFSITE: _____

SVE SYSTEM - MONTHLY O&M					
SVE ALARMS:		KO TANK HIGH LEVEL			
			TIMER SETTINGS		
SVE SYSTEM		READING	TIME	Month	Timer Setting
Blower Hours (take photo)	15733.8		1230	January	8 AM to 7 PM
Pre K/O Vacuum (IWC)	16			February	8 AM to 7 PM
Thermal Anemometer Flow (fpm)	1240			March	8 AM to 8 PM
Thermal Anemometer Temp (C)	45 °F			April	8 AM to 9 PM
Inlet PID	708			May	7 AM to 9 PM
Exhaust PID	624			June	6 AM to 9 PM
Solar Panel Angle	50			July	6 AM to 9 PM
K/O Tank Drum Level	NONE-DRY			August	7 AM to 9 PM
K/O Liquid Drained (gallons)	0			September	8 AM to 9 PM
Timer Setting	7 AM - 9 PM			October	8 AM to 8 PM
Heat Trace (on/off)	OFF			November	9 AM to 8 PM
				December	8 AM to 6 PM

SVE SYSTEM - QUARTERLY SAMPLING		
SAMPLE ID:	Influent 06-16-22	SAMPLE TIME: 13:10
Analyses:	TVPH (8015), VOCs (8260), Fixed Gas (CO/CO2/O2)	
OPERATING WELLS	SVE 2+3	

Change in Well Operation:

LOCATION	VACUUM (IWC)	PID HEADSPACE (PPM)	ADJUSTMENTS
SVE01			
SVE02			
SVE03			
SVE04			

PRODUCT RECOVERY				
LOCATION	DEPTH TO PRODUCT	DEPTH TO WATER	RECOVERED VOLUME	COMMENTS
SVE-1 01		40.12		
SVE-2RS 02		33.02		
SVE-1 03	44.22	47.81	2 gal	1 gal PSH
SVE-1RS 04		46.29		
SVE-1RS				
SVE-1RS				

COMMENTS/OTHER MAINTENANCE:

timer changed from 7AM to 6AM - 9PM.



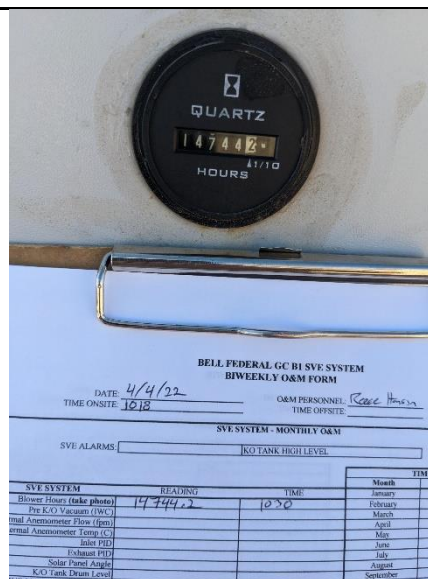
APPENDIX B

Project Photographs

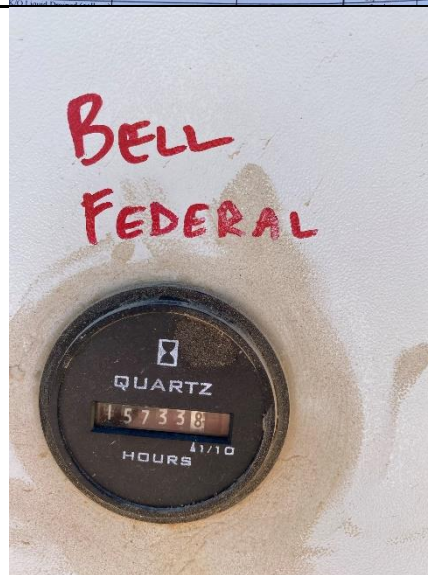
PROJECT PHOTOGRAPHS
 Bell Federal GC B#1
 San Juan County, New Mexico
 Hilcorp Energy Company

Photograph 1

Runtime meter taken on April 4, 2022
 at 10:30 AM
 Hours = 14,744.2

**Photograph 2**

Runtime meter taken on June 16, 2022
 at 12:30 PM
 Hours = 15,733.8





APPENDIX C

Laboratory Analytical Reports



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

July 05, 2022

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

RE: Bell Federal GC B1

OrderNo.: 2206941

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/17/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2206941

Date Reported: 7/5/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Influent 06-16-22

Project: Bell Federal GC B1

Collection Date: 6/16/2022 1:10:00 PM

Lab ID: 2206941-001

Matrix: AIR

Received Date: 6/17/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	13000	250		µg/L	50	6/20/2022 1:19:23 PM	G88881
Surr: BFB	214	15-380		%Rec	50	6/20/2022 1:19:23 PM	G88881
EPA METHOD 8260B: VOLATILES							Analyst: CCM
Benzene	24	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Toluene	69	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Ethylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Naphthalene	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
1-Methylnaphthalene	ND	20		µg/L	50	6/21/2022 2:42:00 PM	R88901
2-Methylnaphthalene	ND	20		µg/L	50	6/21/2022 2:42:00 PM	R88901
Acetone	ND	50		µg/L	50	6/21/2022 2:42:00 PM	R88901
Bromobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Bromodichloromethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Bromoform	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Bromomethane	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
2-Butanone	ND	50		µg/L	50	6/21/2022 2:42:00 PM	R88901
Carbon disulfide	ND	50		µg/L	50	6/21/2022 2:42:00 PM	R88901
Carbon tetrachloride	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Chlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Chloroethane	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
Chloroform	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Chloromethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
2-Chlorotoluene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
4-Chlorotoluene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
cis-1,2-DCE	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
Dibromochloromethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Dibromomethane	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2-Dichlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,3-Dichlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,4-Dichlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Dichlorodifluoromethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1-Dichloroethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1-Dichloroethene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901

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	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 2

Analytical Report

Lab Order 2206941

Date Reported: 7/5/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Influent 06-16-22

Project: Bell Federal GC B1

Collection Date: 6/16/2022 1:10:00 PM

Lab ID: 2206941-001

Matrix: AIR

Received Date: 6/17/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: CCM
1,2-Dichloropropane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,3-Dichloropropane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
2,2-Dichloropropane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1-Dichloropropene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Hexachlorobutadiene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
2-Hexanone	ND	50		µg/L	50	6/21/2022 2:42:00 PM	R88901
Isopropylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
4-Isopropyltoluene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
4-Methyl-2-pentanone	ND	50		µg/L	50	6/21/2022 2:42:00 PM	R88901
Methylene chloride	ND	15		µg/L	50	6/21/2022 2:42:00 PM	R88901
n-Butylbenzene	ND	15		µg/L	50	6/21/2022 2:42:00 PM	R88901
n-Propylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
sec-Butylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Styrene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
tert-Butylbenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
trans-1,2-DCE	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1,1-Trichloroethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,1,2-Trichloroethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Trichloroethene (TCE)	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Trichlorofluoromethane	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
1,2,3-Trichloropropane	ND	10		µg/L	50	6/21/2022 2:42:00 PM	R88901
Vinyl chloride	ND	5.0		µg/L	50	6/21/2022 2:42:00 PM	R88901
Xylenes, Total	38	7.5		µg/L	50	6/21/2022 2:42:00 PM	R88901
Surr: Dibromofluoromethane	91.9	70-130		%Rec	50	6/21/2022 2:42:00 PM	R88901
Surr: 1,2-Dichloroethane-d4	77.3	70-130		%Rec	50	6/21/2022 2:42:00 PM	R88901
Surr: Toluene-d8	104	70-130		%Rec	50	6/21/2022 2:42:00 PM	R88901
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	50	6/21/2022 2:42:00 PM	R88901

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	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 2



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ANALYTICAL SUMMARY REPORT

June 30, 2022

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

Work Order: G22060372

Project Name: 2206941

Energy Laboratories Inc. Gillette WY received the following 1 sample for Hall Environmental on 6/21/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
G22060372-001	2206941-001B; Influent 06-16-22	06/16/22 13:10	06/21/22	Gas	Air Correction Calculations Analysis Corrections 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., 400 W. Boxelder Rd., Gillette, WY 82718, 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 tests results, please contact your Project Manager.

Report Approved By:



CLIENT: Hall Environmental
Project: 2206941
Work Order: G22060372

Report Date: 06/30/22

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.



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LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: 2206941
Client Sample ID: 2206941-001B; Influent 06-16-22
Location:
Lab ID: G22060372-001

Report Date: 06/30/22
Collection Date: 06/16/22 13:10
Date Received: 06/21/22
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
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GAS CHROMATOGRAPHIC ANALYSIS REPORT

Oxygen	21.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Nitrogen	77.99	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Carbon Dioxide	0.82	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Hydrogen Sulfide	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Methane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Ethane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Propane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Isobutane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
n-Butane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Isopentane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
n-Pentane	<0.01	Mol %		GPA 2261-	06/27/22 13:14 / eli-b
Hexanes plus	0.19	Mol %		GPA 2261-	06/27/22 13:14 / eli-b

GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS

Propane	< 0.001	gpm		GPA 2261-	06/27/22 13:14 / eli-b
Isobutane	< 0.001	gpm		GPA 2261-	06/27/22 13:14 / eli-b
n-Butane	< 0.001	gpm		GPA 2261-	06/27/22 13:14 / eli-b
Isopentane	< 0.001	gpm		GPA 2261-	06/27/22 13:14 / eli-b
n-Pentane	< 0.001	gpm		GPA 2261-	06/27/22 13:14 / eli-b
Hexanes plus	0.080	gpm		GPA 2261-	06/27/22 13:14 / eli-b
GPM Total	0.080	gpm		GPA 2261-	06/27/22 13:14 / eli-b
GPM Pentanes plus	0.080	gpm		GPA 2261-	06/27/22 13:14 / eli-b

CALCULATED PROPERTIES

Gross BTU per cu ft @ Std Cond. (HHV)	9			GPA 2261-	06/27/22 13:14 / eli-b
Net BTU per cu ft @ std cond. (LHV)	8			GPA 2261-	06/27/22 13:14 / eli-b
Pseudo-critical Pressure, psia	547			GPA 2261-	06/27/22 13:14 / eli-b
Pseudo-critical Temperature, deg R	242			GPA 2261-	06/27/22 13:14 / eli-b

PHYSICAL PROPERTIES-CALCULATED

Specific Gravity @ 60/60F	1.00			D3588-81	06/27/22 13:14 / eli-b
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COMMENTS

-	-	06/27/22 13:14 / eli-b
---	---	------------------------

- 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 RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Work Order: G22060372

Report Date: 06/30/22

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95							Batch: R383813		
Lab ID: B22062144-001ADUP	Sample Duplicate		Run: GCNGA-B_220627A				06/27/22 09:47		
Oxygen	21.1	Mol %	0.01				0.1	20	
Nitrogen	78.2	Mol %	0.01				0	20	
Carbon Dioxide	0.74	Mol %	0.01				1.4	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: B22062161-002ADUP	Sample Duplicate		Run: GCNGA-B_220627A				06/27/22 11:37		
Oxygen	21.2	Mol %	0.01				0.1	20	
Nitrogen	77.5	Mol %	0.01				0	20	
Carbon Dioxide	0.39	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				67	20	R
n-Butane	0.02	Mol %	0.01				40	20	R
Isopentane	0.04	Mol %	0.01				22	20	R
n-Pentane	0.05	Mol %	0.01				18	20	
Hexanes plus	0.75	Mol %	0.01				5.5	20	
Lab ID: LCS062722	Laboratory Control Sample		Run: GCNGA-B_220627A				06/27/22 14:44		
Oxygen	0.59	Mol %	0.01	118	70	130			
Nitrogen	6.07	Mol %	0.01	101	70	130			
Carbon Dioxide	1.00	Mol %	0.01	101	70	130			
Methane	74.3	Mol %	0.01	99	70	130			
Ethane	6.09	Mol %	0.01	101	70	130			
Propane	5.08	Mol %	0.01	103	70	130			
Isobutane	2.01	Mol %	0.01	100	70	130			
n-Butane	2.01	Mol %	0.01	100	70	130			
Isopentane	1.02	Mol %	0.01	102	70	130			
n-Pentane	1.01	Mol %	0.01	101	70	130			
Hexanes plus	0.78	Mol %	0.01	98	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

R - Relative Percent Difference (RPD) exceeds advisory limit



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Work Order Receipt Checklist

Hall Environmental

G22060372

Login completed by: Jill S. Jeffress

Date Received: 6/21/2022

Reviewed by: Chantel S. Johnson

Received by: jsj

Reviewed Date: 6/23/2022

Carrier name: FedEx

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

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



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

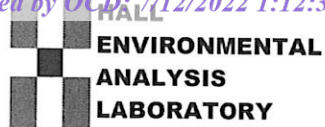
SUB CONTRACTOR	Energy Labs-Gillette	COMPANY	Energy Laboratories	PHONE	(866) 686-7175	FAX	
ADDRESS	400 W Boxelder Rd	ACCOUNT #		EMAIL			
CITY, STATE, ZIP	Gillette, WY 82718						
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2206941-001B	Influent 06-16-22	TEDLAR	Air	6/16/2022 1:10:00 PM	1	Natural Gas O ₂ , CO ₂

622040372

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:	Cmc	Date:	6/17/2022	Time:	7:46 AM	Received By:	JWT	Date:	6/21/22	Time:	10:34 AM
Relinquished By:		Date:		Time:		Received By:		Date:		Time:	
Relinquished By:		Date:		Time:		Received By:		Date:		Time:	
TAT:	Standard <input checked="" type="checkbox"/>	RUSH	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE					
Temp of samples _____ °C Attempt to Cool? _____						FOR LAB USE ONLY					
Comments: _____											



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: 2206941

RcptNo: 1

Received By: Juan Rojas

6/17/2022 7:00:00 AM

Completed By: Cheyenne Cason

6/17/2022 7:43:34 AM

Reviewed By:

JN 6/17/22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: CMC 6/17/22

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp Energy Co.

Mitch Killough

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)

Accreditation:

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

Project Manager:

Stuart Hyde

Sampler: Danny Burns

On Ice: ☐ Yes ☒ No

of Coolers: 1

Cooler Temp (including CF): N/A

(°C)

Date

Time

Matrix

Sample Name

6-16-22 1310 Air Influent 06-16-22

Container

Type and #

2-Tedlar

Preservative

Type

NA

HEAL No.

2206941

001

Turn-Around Time:

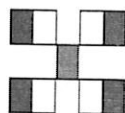
5 day

☒ Standard☐ Rush

Project Name:

Bell Federal GC B1

Project #:

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX / MTBE / TMB's (8021)		
TPH:8015D(GRO / DRO / MRO)		X
8081 Pesticides/8082 PCB's		
EDB (Method 504.1)		
PAHs by 8310 or 8270SIMS		
RCRA 8 Metals		
Cl, F, Br, NO ₂ , NO ₃ , PO ₄ , SO ₄		
8260 (VOA)		
8270 (Semi-VOA)		
Total Coliform (Present/Absent)		X
Full VOC 8260		X
Fixed Gas CO ₂ /H ₂		X

Remarks:

cc: dburns@ensolum.com
ecarroll@ensolum.com
dhenemann@ensolum.com

Received by: Via: Date Time

Stuart Hyde 6/16/22 1430

Received by: Via: Date Time

Stuart Hyde 6/17/22 7:00

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 124694

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 124694
	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 October 31, 2022.	9/7/2022