**REVIEWED** By Mike Buchanan at 9:41 am, Apr 09, 2024



# ENSOLUM

January 15, 2024

#### New Mexico Oil Conservation Division

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

Re: Fourth Quarter 2023 – SVE System Update Sunray B 1B San Juan County, New Mexico Hilcorp Energy Company NMOCD Incident No: nAPP2212649502

To Whom it May Concern:

Review of the Fourth Quarter 2023--SVE System Update for Sunray B 1B: Content Satisfactory 1. Continue to perform O&M as scheduled and install pitot tubes as necessary. Please include field and installation notes when completed for next report to OCD. 2. Operate system as normal. 3. Submit next system update report to OCD as Hilcorp has

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this Fourth Quarter 2023 – SVE System Update report summarizing the soil vapor extraction (SVE) system performance at the Sunray B 1B natural gas production well (Site) on land managed by the Bureau of Land Management (BLM) in Unit F, Section 15, Township 30 North, Range 10 West in San Juan County, New Mexico (Figure 1). After a temporary startup on August 29, 2023, followed by a month long shut down, the SVE system was put into full time operation on September 29, 2023, to remediate subsurface soil impacts resulting from a release of approximately 14 barrels (bbls) of natural gas condensate and 7 bbls of produced water. This report summarizes Site activities performed in September, October, November, and December of 2023.

#### **SVE SYSTEM SPECIFICATIONS**

The SVE system at the Site consists of a 3-phase, 5 horsepower Howden Roots 32 URAI rotary lobe blower capable of producing 112 cubic feet per minute (cfm) flow at 82 inches of water column (IWC) vacuum. The system is powered by a permanent power drop and is intended to run 24 hours per day. Three SVE wells are currently in operation and are shown on Figure 2. SVE wells SVE01, SVE02, and SVE03 are screened at varying depths up to 25 feet below ground surface (bgs) to address residual soil impacts in the unsaturated zone.

#### SYSTEM STARTUP AND FOURTH QUARTER 2023 ACTIVITIES

The initial startup of the Site SVE system was performed on August 29 and 30, 2023. Based on the New Mexico Oil Conservation Division (NMOCD) Conditions of Approval (COAs), dated February 10, 2023, field data measurements were collected from the system and included the following parameters: total system flow, estimated flow rates from each SVE well, photoionization detector (PID) measurements of volatile organic compounds (VOCs) from each SVE well, vacuum measurements from each SVE well, and oxygen/carbon dioxide measurements via hand-held analyzers from each SVE well. In accordance with the COAs, initial air samples were also collected on August 29 and 30, 2023; however, due to the high decibel output of the rotary lobe blower, Hilcorp and Ensolum determined a muffler/silencer was required in order to meet personnel health and safety requirements. As such, the system was shut down until a silencer

Sunray B 1B

could be installed. The NMOCD and BLM were notified of the system shut down, with agency communications included as Appendix A.

Following the addition of the silencer, the system was re-started on September 29, 2023. In accordance with the NMOCD COAs for the Site, daily site visits were conducted for the first week of operation and then weekly thereafter for the remainder of September, October, November, and December 2023. Field parameters noted above were collected during each visit. Field notes taken during operations and maintenance (O&M) visits are presented in Appendix B. Since startup on September 29, 2023, vacuum extraction was performed on all Site SVE wells in order to induce flow in impacted soil zones. Between September 29 and December 28, 2023, the SVE system operated for 2,181.4 hours for a runtime efficiency of 95 percent (%). Appendix C presents photographs of the runtime meter for calculating the fourth quarter 2023 runtime efficiency. Table 1 presents the SVE system operational hours and calculated percentage runtime.

Based on the February 2023 COAs, initial air samples were collected on August 29 and 30, 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 PID for organic vapor monitoring (OVM). The emission sample was collected directly into two 1-Liter Tedlar<sup>®</sup> bags and submitted to Hall Environmental Analysis Laboratory (now Eurofins Environment Testing) in Albuquerque, New Mexico for analysis of total volatile petroleum hydrocarbons (TVPH – also known as total petroleum hydrocarbons – gasoline range organics (TPH-GRO)) following United States Environmental Protection Agency (EPA) Method 8015D, VOCs following EPA Method 8260B, and fixed gas analysis of oxygen and carbon dioxide following Gas Processors Association (GPA) Method 2261. Upon re-starting the system on September 29, 2023, samples were collected weekly for the first month of operation and then biweekly (once every two weeks) through the end of the fourth quarter of 2023. A summary of field measurements and analytical data collected between September and December 2023 are presented in Tables 2 and 3, respectively. Note: analytical data from the last two sampling events conducted on December 13 and December 28, 2023, have not been received from the laboratory; this data will be included in the following quarterly report. Full laboratory analytical reports are attached as Appendix D. Oxygen and carbon dioxide levels over time are presented in Graphs 1 and 2, respectively.

Air sample data and measured influent flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 4). Based on these estimates, 825 pounds (0.41 tons) of TVPH have been removed by the system to date between system startup and November 28, 2023. No phase-separated hydrocarbons were recovered from the system during the O&M and sampling period described above.

#### DISCUSSION AND RECOMMENDATIONS

As approved by the NMOCD (Appendix D), activities and data collected during the fourth quarter of 2023 are summarized in this report. Accurate flow measurements at SVE03 could not be obtained during the fourth quarter of 2023 due to the rotameter being undersized. Ensolum has purchased pitot tubes to replace the individual well rotameters and will install the new flow measurement devices in first quarter of 2024 in order to obtain more accurate data on the individual well legs.

A decrease in mass removal rates was observed during the first quarter of system operation, as is expected following initial startup. Mass removal has remained consistent from October 19 through the end of November 2023 with the system continuing to remove over 10 pounds per day of petroleum hydrocarbons.

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Monthly O&M visits and bi-monthly (every other month) sampling events will continue to be performed by Ensolum and/or Hilcorp personnel to ensure the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following quarterly report.

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

Sincerely,

Ensolum, LLC

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 Radius of Influence and Radius of Effect Table 1 Soil Vapor Extraction System Runtime Calculations Table 2 Soil Vapor Extraction System Field Measurements Table 3 Soil Vapor Extraction System Air Analytical Results Table 4 Soil Vapor Extraction System Mass Removal and Emissions Graph 1 Oxygen vs Time Graph 2 Carbon Dioxide vs Time Agency Correspondence Appendix A Appendix B **Field Notes** Appendix C **Project Photographs**
- Appendix D Laboratory Analytical Reports

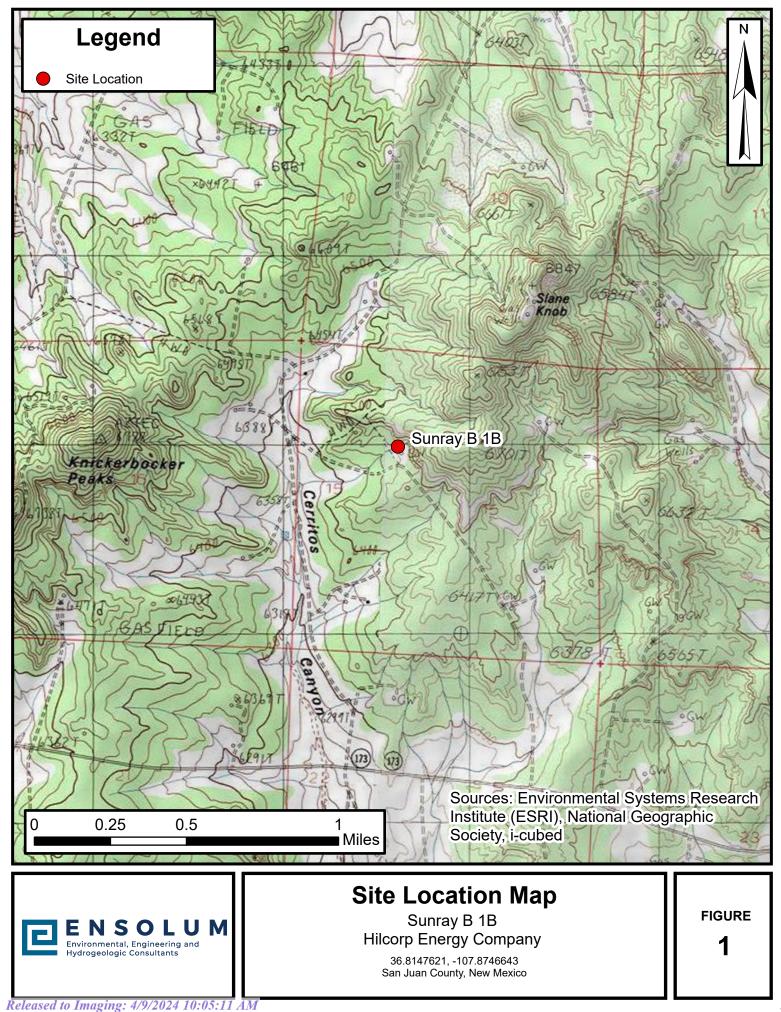




# FIGURES

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Received by OCD: 1/15/2024 4:03:58 PM







# TABLES AND GRAPHS

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#### TABLE 1

#### SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS

Sunray B 1B

Hilcorp Energy Company

San Juan County, New Mexico

Date	Total Operational Hours	Delta Hours	Days	Percent Runtime
9/29/2023	126.8		Startup	
12/28/2023	2,181.4	2,054.6	90	95%

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TABLE 2         SOIL VAPOR EXTRACTION SYSTEM FIELD MEASUREMENTS         Sunray B 1B         Hilcorp Energy Company         San Juan County, New Mexico								
SVE Well ID	Date	PID (ppm)	Differential Pressure (IWC)	Flow Rate (acfm)	Flow Rate (scfm) <sup>(1)(2)</sup>	Vacuum (IWC)	Oxygen (%)	Carbon Dioxide (%)
	8/29/2023	788	2.7	144	92	74.8		
	8/30/2023	1,826				68.0	20.9	0.62
_	9/29/2023	538	3.0	151	99	68.0	20.9	0.26
-	10/6/2023	431	3.0	151	101	60.5	20.9	0.00
-	10/12/2023	356	5.3	201	127	80.0	20.9	0.00
-	10/19/2023	399	5.7	209	131	81.0	20.9	0.10
Influent, All Wells	10/26/2023 10/31/2023	165 278	6.5 5.6	223 207	146 134	68.0 72.1	20.9	0.10
-	11/16/2023	378	6.9	207	153	61.2		
-	11/28/2023	147	7.2	230	155	61.2		
-	12/7/2023	205	7.0	233	157	54.4	19.6	0.02
-	12/13/2023	165	6.9	230	153	61.2	19.3	0.02
	12/20/2023	182	7.1	233	155	61.2		
	12/28/2023	39	4.8	192	135	40.8		
	8/29/2023	2,789			16	78.9		
-	8/30/2023	3,588			20		20.9	0.62
-	9/29/2023	1,312			10	76.2	20.9	0.18
-	10/6/2023	1,429			10	66.0	20.9	
	10/12/2023	2,450			9	76.0	20.9	0.18
	10/19/2023	672			10	70.0	20.9	0.08
	10/26/2023	420			10	68.0	20.9	0.08
SVE01	10/31/2023	348				72.1	20.9	0.02
	11/16/2023	688			8	78.9	19.8	0.06
	11/28/2023	453			8	62.6	20.2	0.04
	12/7/2023	430			8	58.0	19.6	0.02
	12/13/2023	405			10	59.8	19.3	0.02
	12/20/2023				12	59.8		
	12/28/2023	20			9	49.0	19.3	0.04
	8/29/2023	416			16	81.6		
	8/30/2023	1,849			23		20.9	0.62
	9/29/2023	403			13	73.4	20.9	0.12
	10/6/2023	382			22	66.0	20.9	
	10/12/2023	540			16	72.0	20.9	0.10
	10/19/2023	288			14	70.0	20.9	0.08
SVE02	10/26/2023	95			10	72.0	20.9	0.04
37202	10/31/2023	215			18	69.4	20.9	0.10
	11/16/2023	515			15	62.6	19.8	0.02
	11/28/2023	93			19	59.8	20.2	0.02
	12/7/2023	55			18	56.0	19.6	0.02
-	12/13/2023	107			25	57.1	19.3	0.00
-	12/20/2023	44			24	54.4		
	12/28/2023				18	43.5	19.3	0.02
	8/29/2023	174			25	73.4		
	8/30/2023	426			>25		20.9	0.62
	9/29/2023	248			>25	65.3	20.9	0.20
-	10/6/2023 10/12/2023	162			40	52.0 52.0	20.9	
	10/12/2023	450 131			50 <50	52.0	20.9 20.9	0.14 0.10
	10/19/2023	88			>50	55.0	20.9	0.10
SVE03	10/20/2023	89			>50	53.0	20.9	0.08
+	11/16/2023	258			>50	50.3	19.8	0.02
	11/28/2023	148			>50	47.6	20.2	0.02
	12/7/2023	45			>50	44.0	19.6	0.02
	12/13/2023	175			>50	50.3	19.3	0.02
	12/20/2023				>50	46.2		
	12/28/2023	34			>50	35.4	19.3	0.04

# 🖻 E N S O L U M

		SOIL V	Hile	TABLE 2         FION SYSTEM F         Sunray B 1B         corp Energy Comparison         uan County, New N	any	MENTS		
SVE Well ID	Date	PID (ppm)	Differential Pressure (IWC)	Flow Rate (acfm)	Flow Rate (scfm) <sup>(1)(2)</sup>	Vacuum (IWC)	Oxygen (%)	Carbon Dioxide (%)

Notes:

(1): individual well flow rates in scfm estimated based on rotometer field measurements

(2): total system flow rates in scfm calculated based on pitot tube differential pressure measurements

IWC: inches of water column

PID: photoionization detector

ppm: parts per million

acfm: actual cubic feet per minute

scfm: standard cubic feet per minute

%: percent

--: not measured

# ENSOLUM

		SOIL VAPOR	Hi	TABLE 3SYSTEM EMISSSunray B 1BIcorp Energy CompJuan County, New M	any	AL RESULTS		
Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (%)	Carbon Dioxide (%)
8/29/2023	788	18	190	6.8	58	5,900	18.38%	4.23%
8/30/2023	1,826	10	230	<10	77	6,000	21.39%	0.87%
9/29/2023	538	4.8	140	11	100	4,100	21.67%	0.36%
10/6/2023	529	<2.0	48	<5.0	41	1,400	21.74%	0.18%
10/12/2023	357	<2.0	47	<5.0	51	1,800	21.69%	0.22%
10/19/2023	399	<5.0	29	<5.0	29	1,200	21.81%	0.16%
10/26/2023	165	<5.0	26	<5.0	21	960	21.80%	0.15%
10/31/2023	278	0.53	30	3.3	42	900	21.60%	0.17%
11/16/2023	378	0.41	21	2.5	35	1,100	21.61%	0.10%
11/28/2023	147	<0.50	13	1.7	22	750	21.64%	0.10%

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#### Notes:

GRO: gasoline range hydrocarbons

µg/L: microgram per liter

PID: photoionization detector

ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

%: percent

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

#### Ensolum

### E N S O L U M

# TABLE 4 SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS Sunray B 1B Hilcorp Energy Company San Juan County, New Mexico

			Laboratory Analysis			
Date	PID (ppm)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	TVPH (μg/L)
8/29/2023	788	18	190	6.8	58	5,900
8/30/2023	1,826	10	230	10	77	6,000
9/29/2023	538	4.8	140	11	100	4,100
10/6/2023	529	2.0	48	5.0	41	1,400
10/12/2023	357	2.0	47	5.0	51	1,800
10/19/2023	399	5.0	29	5.0	29	1,200
10/26/2023	165	5.0	26	5.0	21	960
10/31/2023	278	0.53	30	3.3	42	900
11/16/2023	378	0.41	21	2.5	35	1,100
11/28/2023	147	0.50	13	1.7	22	750
Average	541	4.8	77	5.5	48	2,411

#### Vapor Extraction Summary

Date	Flow Rate (scfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (Ib/hr)	Toluene (Ib/hr)	Ethylbenzene (Ib/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
9/29/2023	99.0			ι	Jpdated System Startu	p		
10/6/2023	101	1,015,656	1,015,656	0.00127	0.035	0.0030	0.026	1.03
10/12/2023	127							
10/19/2023	131	3,261,258	2,245,602	0.0015	0.017	0.0022	0.0152	0.56
10/26/2023	146	4,699,650	1,438,392	0.0026	0.0142	0.0026	0.0130	0.56
10/31/2023	134	5,446,566	746,916	0.00145	0.0147	0.0022	0.016	0.49
11/16/2023	153	8,945,064	3,498,498	0.00025	0.0137	0.00156	0.021	0.54
11/28/2023	156	11,562,120	2,617,056	0.00026	0.0098	0.00121	0.0165	0.53
			Average	0.00122	0.017	0.0021	0.018	0.62

Mass Recovery

Date	Total Operational Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
9/29/2023	127			ι	Jpdated System Startu	ıp		
10/6/2023	294	168	0.21	5.9	0.50	4.4	172	0.086
10/12/2023								
10/19/2023	580	286	0.43	4.8	0.62	4.3	161	0.081
10/26/2023	744	164	0.43	2.3	0.43	2.1	92	0.046
10/31/2023	837	93	0.134	1.36	0.20	1.53	45	0.023
11/16/2023	1,218	381	0.096	5.2	0.59	7.9	205	0.102
11/28/2023	1,498	280	0.074	2.7	0.34	4.6	149	0.075
	Total Ma	ss Recovery to Date	1.38	22	2.7	25	825	0.41

Notes:

cf: cubic feet

scfm: standard cubic feet per minute

µg/L: micrograms per liter

lb/hr: pounds per hour

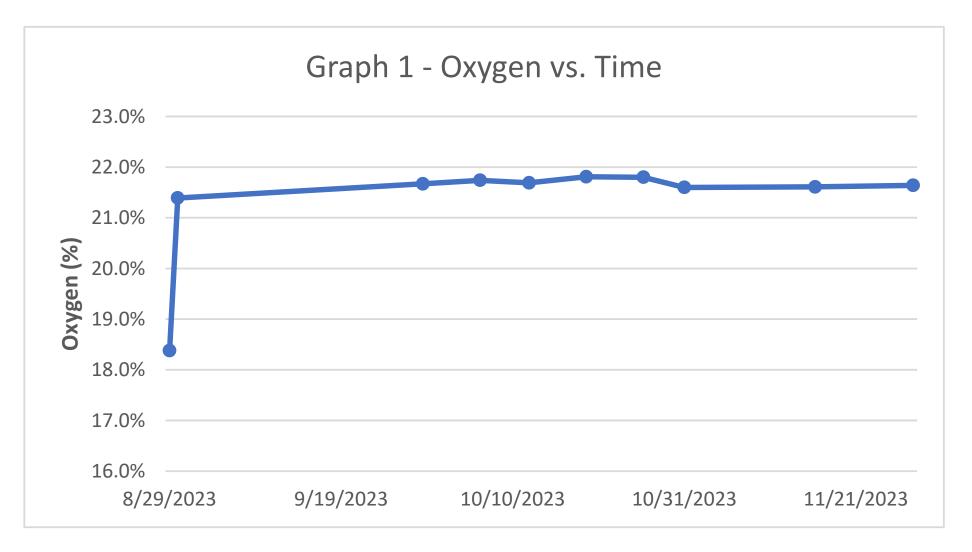
PID: photoionization detector

ppm: parts per million

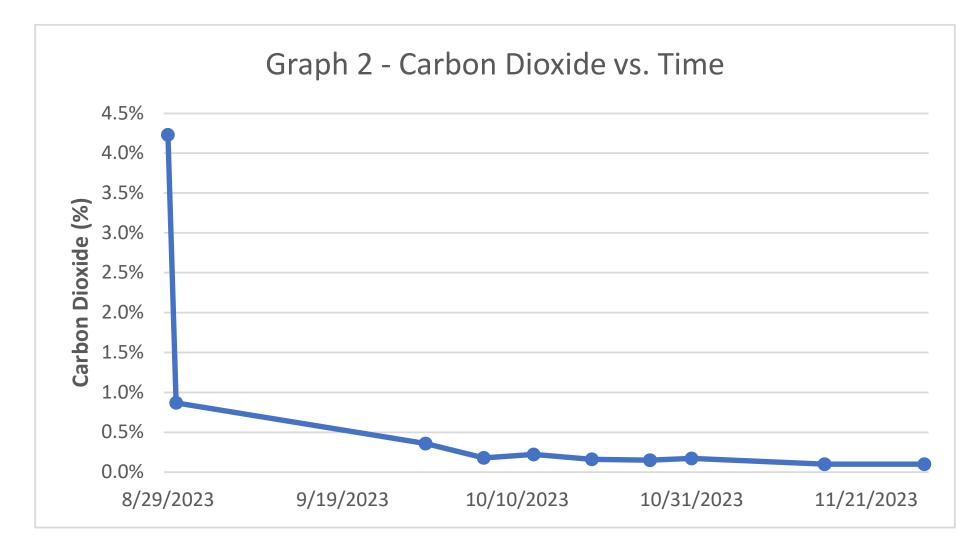
TVPH: total volatile petroleum hydrocarbons

--: not measured

gray: laboratory reporting limit used for calculating emissions



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# APPENDIX A

NMOCD Correspondence

From:	Adeloye, Abiodun A
То:	Stuart Hyde; Velez, Nelson, EMNRD
Cc:	Mitch Killough; Devin Hencmann; Danny Burns; Bryan Hall; Chad Perkins
Subject:	RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request
Date:	Tuesday, October 3, 2023 7:53:53 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png
	image005.png

#### [ \*\*EXTERNAL EMAIL\*\*]

Thank you Stuart for the updates.

Abiodun Adeloye (Emmanuel) Natural Resources Specialist (NRS) 6251 College Blvd., Suite A Farmington, NM 87402 Office: 505-564-7665 Mobile: 505-635-0984

From: Stuart Hyde <shyde@ensolum.com>
Sent: Monday, October 2, 2023 4:12 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Adeloye, Abiodun A
<aadeloye@blm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>;
Danny Burns <dburns@ensolum.com>; Bryan Hall <bhall@hilcorp.com>; Chad Perkins
<cperkins@hilcorp.com>
Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

All,

The SVE system at the Sunray B 1B site was re-started on Friday September 29<sup>th</sup> once we were able to install the proper sound controls. We visited the site today and we had 100% runtime over the weekend, so it appears that we are up and operating. We will be conducting daily site visits this week to ensure proper operation and will let you know if anything changes.

Please reach out with any questions. Thanks.



From: Velez, Nelson, EMNRD <<u>Nelson.Velez@emnrd.nm.gov</u>>

Sent: Wednesday, August 16, 2023 1:45 PM
To: Stuart Hyde <<u>shyde@ensolum.com</u>>; Adeloye, Abiodun A <<u>aadeloye@blm.gov</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>; Danny Burns <<u>dburns@ensolum.com</u>>
Subject: Re: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

#### [ \*\*EXTERNAL EMAIL\*\*]

Stuart,

Time extension request for an additional 45-days is approved. Remediation Due date updated to October 2, 2023. Please notify OCD on when the startup occurs.

Regards,

Nelson Velez • Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | <u>nelson.velez@emnrd.nm.gov</u>

http://www.emnrd.state.nm.us/OCD/



From: Stuart Hyde <<u>shyde@ensolum.com</u>>
Sent: Wednesday, August 16, 2023 12:20 PM
To: Velez, Nelson, EMNRD <<u>Nelson.Velez@emnrd.nm.gov</u>>; Adeloye, Abiodun A
<<u>aadeloye@blm.gov</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;

Danny Burns <<u>dburns@ensolum.com</u>>

Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

Nelson,

As we discussed on the phone, we have had additional delays at the Sunray B 1B in obtaining the necessary parts and, now, equipment to complete the installation of the SVE system. As such, we are

requesting an additional 45 days for the startup deadline for the system. I hope this amount of time is overkill but would like to heir on the side of caution this time. If approved, the requested new deadline would be Sunday October 1, 2023.

Please reach out with any questions or comments. Thanks and have a good afternoon.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From: Velez, Nelson, EMNRD <<u>Nelson.Velez@emnrd.nm.gov</u>>
Sent: Tuesday, August 1, 2023 2:11 PM
To: Adeloye, Abiodun A <<u>aadeloye@blm.gov</u>>; Stuart Hyde <<u>shyde@ensolum.com</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;
Danny Burns <<u>dburns@ensolum.com</u>>
Subject: Re: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

#### [ \*\*EXTERNAL EMAIL\*\*]

Good day Stuart,

Your 2 week time extension request is approved. Remediation Due date has been updated to August 17, 2023 within the incident page.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards,

Nelson Velez • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/\_



From: Adeloye, Abiodun A <<u>aadeloye@blm.gov</u>>
Sent: Tuesday, August 1, 2023 11:55 AM
To: Stuart Hyde <<u>shyde@ensolum.com</u>>; Velez, Nelson, EMNRD <<u>Nelson.Velez@emnrd.nm.gov</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;
Danny Burns <<u>dburns@ensolum.com</u>>
Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

Hi, Stuart, the BLM-FFO approves the two weeks extension for the SVE work. Please include this approval with your closure report.

Please let me know if you have any questions. Thank you.

Abiodun Adeloye (Emmanuel) Natural Resources Specialist (NRS) 6251 College Blvd., Suite A Farmington, NM 87402 Office: 505-564-7665 Mobile: 505-635-0984

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, August 1, 2023 11:33 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Adeloye, Abiodun A <aadeloye@blm.gov>; Devin
Hencmann <dhencmann@ensolum.com>; Danny Burns <dburns@ensolum.com>
Subject: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Nelson and Emmanuel,

On behalf of Hilcorp Energy Company, we are requesting a two-week extension to the August 3, 2023 startup deadline for the SVE system at the Sunray B 1B site (new deadline of August 17, 2023).

The SVE skid and equipment was installed at the Site on July 28, 2023 and is powered and ready to go. However, due to low inventory and delays in obtaining parts for the well connections and manifold (connecting the wells to the skid), we have not yet been able to complete the final installation. We are anticipating delivery of the remaining parts this week and should be able to start the system within the next week or so.

Please let us know if you have any questions or comments regarding the above request or the site. Thanks.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From:	Velez, Nelson, EMNRD
То:	Danny Burns; Adeloye, Abiodun A; Stuart Hyde
Cc:	Mitch Killough; Devin Hencmann
Subject:	Re: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup
Date:	Thursday, August 31, 2023 7:11:54 AM
Attachments:	image001.png image002.png image003.png image004.png Outlook-go2ug2gc.png

#### [ \*\*EXTERNAL EMAIL\*\*]

Good morning Danny,

Thank you for the correspondence. Please let us know when the re-start will occur.

Have a good & safe day.

Regards,

**Nelson Velez** • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/\_



From: Danny Burns <dburns@ensolum.com>
Sent: Wednesday, August 30, 2023 4:39 PM
To: Adeloye, Abiodun A <aadeloye@blm.gov>; Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>
Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup

Nelson and Emmanuel,

Hilcorp conducted a safety inspection of the new SVE skid at the Sunray B 1B and discovered that it exceeds noise standards on the pad, requiring ear protection. So, we are shutting the system down as of today until an exhaust silencer/muffler can be installed to mitigate the excessive noise. We will re-start the system with the sampling schedule per the conditions of approval after the installation. The remediation start up date was extended to October 2, 2023, and we anticipate we should be able to acquire and install the noise mitigation equipment before that date. If for some reason we

cannot, we will advise you before then.

Thanks,



From: Adeloye, Abiodun A <aadeloye@blm.gov>
Sent: Wednesday, August 30, 2023 9:01 AM
To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>;
Danny Burns <dburns@ensolum.com>
Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup

#### [ \*\*EXTERNAL EMAIL\*\*]

Thanks, Stuart for the notification.

Abiodun Adeloye (Emmanuel) Natural Resources Specialist (NRS) 6251 College Blvd., Suite A Farmington, NM 87402 Office: 505-564-7665 Mobile: 505-635-0984

From: Stuart Hyde <<u>shyde@ensolum.com</u>>
Sent: Wednesday, August 30, 2023 7:50 AM
To: Velez, Nelson, EMNRD <<u>Nelson.Velez@emnrd.nm.gov</u>>; Adeloye, Abiodun A
<<u>aadeloye@blm.gov</u>>
Cc: Mitch Killough <<u>mkillough@hilcorp.com</u>>; Devin Hencmann <<u>dhencmann@ensolum.com</u>>;
Danny Burns <<u>dburns@ensolum.com</u>>
Subject: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup

# This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Nelson and Emmanuel,

We were able to start the new SVE system at the Sunray B 1B yesterday afternoon, August 29, 2023. Per the NMOCD conditions of approval, we collected the initial startup air sample yesterday evening and will collect the follow up air sample this morning. We will keep you updated if there are any

issues with the system in the first few weeks of operation, but looks like we are up and running.

Also, due to only having one month left in the third quarter of 2023, we would like to delay the first quarterly report preparation in order to combine the last month of Q3 with Q4 O&M and sampling. As such, the first report would be submitted by January 15, 2024. Please let us know if you approve of this reporting timeline.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f

From:	Velez, Nelson, EMNRD
To:	Stuart Hyde; Adeloye, Abiodun A
Cc:	Mitch Killough; Devin Hencmann; Danny Burns; Bratcher, Michael, EMNRD
Subject:	Re: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup
Date:	Wednesday, August 30, 2023 8:09:13 AM
Attachments:	image001.png image002.png image003.png image004.png Outlook-Irzcoi3u.png

[ \*\*EXTERNAL EMAIL\*\*]

Stuart,

Thank you for the correspondence.

Combining the 3<sup>rd</sup> and 4<sup>th</sup> quarters for the first O & M and sampling quarterly report would be acceptable to the OCD.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

**Nelson Velez** • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/



From: Stuart Hyde <shyde@ensolum.com>
Sent: Wednesday, August 30, 2023 7:49 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Adeloye, Abiodun A
<aadeloye@blm.gov>

Cc: Mitch Killough <mkillough@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>;Danny Burns <dburns@ensolum.com>Subject: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Nelson and Emmanuel,

We were able to start the new SVE system at the Sunray B 1B yesterday afternoon, August 29, 2023. Per the NMOCD conditions of approval, we collected the initial startup air sample yesterday evening and will collect the follow up air sample this morning. We will keep you updated if there are any issues with the system in the first few weeks of operation, but looks like we are up and running.

Also, due to only having one month left in the third quarter of 2023, we would like to delay the first quarterly report preparation in order to combine the last month of Q3 with Q4 O&M and sampling. As such, the first report would be submitted by January 15, 2024. Please let us know if you approve of this reporting timeline.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From:	Velez, Nelson, EMNRD
То:	Adeloye, Abiodun A; Stuart Hyde
Cc:	Mitch Killough; Devin Hencmann; Danny Burns
Subject:	Re: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request
Date:	Tuesday, August 1, 2023 12:11:31 PM
Attachments:	image001.png image002.png image003.png image004.png Outlook-ko3bs0tn.png

#### [ \*\*EXTERNAL EMAIL\*\*]

Good day Stuart,

Your 2 week time extension request is approved. Remediation Due date has been updated to August 17, 2023 within the incident page.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards,

**Nelson Velez** • Environmental Specialist - Adv Environmental Bureau | EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87410 (505) 469-6146 | nelson.velez@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/



From: Adeloye, Abiodun A <aadeloye@blm.gov>

Sent: Tuesday, August 1, 2023 11:55 AM

To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Devin Hencmann <dhencmann@ensolum.com>;
Danny Burns <dburns@ensolum.com>

Subject: RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

Hi, Stuart, the BLM-FFO approves the two weeks extension for the SVE work. Please include this approval with your closure report.

Please let me know if you have any questions.

Thank you.

Abiodun Adeloye (Emmanuel) Natural Resources Specialist (NRS) 6251 College Blvd., Suite A Farmington, NM 87402 Office: 505-564-7665 Mobile: 505-635-0984

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, August 1, 2023 11:33 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mitch Killough <mkillough@hilcorp.com>; Adeloye, Abiodun A <aadeloye@blm.gov>; Devin Hencmann <dhencmann@ensolum.com>; Danny Burns <dburns@ensolum.com>
Subject: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Nelson and Emmanuel,

On behalf of Hilcorp Energy Company, we are requesting a two-week extension to the August 3, 2023 startup deadline for the SVE system at the Sunray B 1B site (new deadline of August 17, 2023). The SVE skid and equipment was installed at the Site on July 28, 2023 and is powered and ready to go. However, due to low inventory and delays in obtaining parts for the well connections and manifold (connecting the wells to the skid), we have not yet been able to complete the final installation. We are anticipating delivery of the remaining parts this week and should be able to start the system within the next week or so.

Please let us know if you have any questions or comments regarding the above request or the site. Thanks.



Stuart Hyde, LG Senior Geologist 970-903-1607 Ensolum, LLC in f Y

From:	Adeloye, Abiodun A
То:	Stuart Hyde; Velez, Nelson, EMNRD
Cc:	Mitch Killough; Devin Hencmann; Danny Burns
Subject:	RE: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request
Date:	Tuesday, August 1, 2023 11:55:32 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png

#### [ \*\*EXTERNAL EMAIL\*\*]

Hi, Stuart, the BLM-FFO approves the two weeks extension for the SVE work. Please include this approval with your closure report.

Please let me know if you have any questions. Thank you.

Abiodun Adeloye (Emmanuel) Natural Resources Specialist (NRS) 6251 College Blvd., Suite A Farmington, NM 87402 Office: 505-564-7665 Mobile: 505-635-0984

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Sent: Tuesday, August 1, 2023 11:33 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
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Hencmann <dhencmann@ensolum.com>; Danny Burns <dburns@ensolum.com>
Subject: [EXTERNAL] NAPP2212649502 - Sunray B 1B SVE Startup Extension Request

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the system within the next week or so.

Please let us know if you have any questions or comments regarding the above request or the site. Thanks.





# APPENDIX B

**Field Notes** 

Received by OCD: 1/15/2024 4:03:58 PM Location B1B Project / Client HEC Page 31 of 180 Date 8-29-23 Sunny Hot DB Truck/tools, HVAS, PID 0930 - Onsite for SVE system start up Review MASP, sign JSA. Calibrate Mini RAE Lite PID W/ 100 ppm Isobutylene Passed Bump PID Rendings w/system off Hearspace 3,603 ppm SVEOI 1,854 02 42 03 1315 - Start up SNE system. Hours meter started w/ 1.5 hours on it. 1330- SNE Parameters Total 5.5 inly Total Flow - Vac-5. Fill 2,789 SVE 01 - 16 1 set m 20 - 5.8 02- 16 setm 416 -6.0 174 03-725 sch 5.4 Influent PID -Exhaust 11D - 1, 141 pm Diff. Pressure - 2.7 INC 1420 - Influent 8/29/23 collected. Released to maging 4. 4264 10 0521 MAM

Received by OCD: 1/15/2024 4:03:58 PM

Location Sunray BIB Date 8-30-23 6 Project / Client HEC EC, TrUCK, PID, G-Gas, Vac 15:30 EC ON Size For SUE OBM b Sampling 73'Euro SINC Vac 20 SCFM GUEDI SVEDI 23 SCAM SVEO3 7255CFM Headspace PIP 3,589 SVEDI SVE07 1,849 426 SHEO3 1826 gpm PID A hfluent 02 20.9 0.0 H25 CO G 0-62 Coz CHH 7% LEL 0.08 70 UP1 Influent 8-30 collected @ Kand Hours 29

Page 32 of 180

Received by OCD: 1/15/2024 4:03:58 PM Page 33 of 180 9-29-23 SUNTAY (HEC) 20 Sanny 70's EC TRUCK, VOC, PID 10:45 EC DA Siter For DEM System on & ranning Vac: 5 in Hay diff press: 73 INC 4 Hours = 126.8 @ 11:29 30 % PAMPAN FAM SOFA Why PPM CHy OzaCoziCo H25 FIOW VOCIPID Wells 2 20.9 0.18 0 0.0 10 5.6 1312 SVEDI 12.5 5.4 403 0 20.9 0-12 0 0 07 6 20.9 0.26 0 0 725 4.8 248 03 2 20.9 0,2600 5 538 Influent Influent sample collected @ 11:70 Condensation in site tube of Ko tank 11:40 Ec Off-Sile UN 9-29 Released to Imaging: 4/9/2024 10:05:11 AM

Dunray Dis 1/15/2024 A198:58 PM Hilcory Evergy 10/2/2027 Received by OCD: SHA Dodge 1500 PID, 4-gas, Eagle, High Vac Rump! 1100 SH ansite, system on it running, General System D+M and emissions sampling 5"Hg 73"H20 Vac Diff Pressure 198.8 @ 11:21 AM Hours "H20 PPM 80 90 70 APM 11Pm PID CAY Oa CO2 CO H2S 444 SCFM Well Flaw Vac 1800 290 20,9 0.00 0 0.00 406,8 9 20,9 0.00 0 0.0 SVEO 10 76 77 725 SVEO2 SVE03 1623 65 pm 20.9 0.00 0 725 65 0,0 596 75pp 20.9 Influent 0.00 0.0 D SUEOI Rotanieter youncing up to 33 setting turned value hulfwy to settle and reading Estim at half flow 1145 - SVEDI rotameter stabilized Closefor of significant liquid in meler site the -No liquid i- KO tunk site tube Released to Enaging: 492624 14-85:11 AM AM

Received by OCD: 1/15/2024 Page 35 of 180 Sunray B 1B Date 10-3-23 21Summy, 705 HEC HEC DB Truck/tools, PID, G-gas, HVAS 10:00-Onsite for week 1 SNE OfM Review HASP, sign JSA, SVE Parameters @ 12:30 Total Flow - 86 serm Vac 5 in Ha 736 ppm Echanot PID 150 F Temp -3.8 in H20 Diff. Press KU Tank a empty Influent SVE01 03 02 Flow (SCFM) 5 in 1,86 10 28 48 Vac (in. HeO) 70 58 68 DB PID (ppm) 502 1,320 481 294 (Hy (ppm) 15 60 5 0 OKY (Vo /1) 20.9 20.9 20.9 20.9 H15 (ppm) 6.0 0.0 0.0 0.0 CU (ppm) 0 0 0 0 LO7 (vol1/) -0.02 -0.02 0.02 50.0<sup>-</sup> (Hy (1. Lei) -7 1430 - 0831 te -7-4:33 Hours 226.0

Released to Imaging: 4/9/2024 10:05:11 AM

Pt.

Page 36 of 180 Location Sunray B 1B 22' Date 10-4-23 Project / Client HEC Sumy DB Truck/fools, HVAS, MD, 6-gas Øs 1030-Onsite for start-up OtM Review HASP, sign JSA System on trunning upon arrival. Bump PID w/ 100 pm isobutylene, Pass SVE Parameters @ 12:30 Total Flow - 83 scen Total Vac - 5 in Hg SVE OR Flow PZ Dac Influent PID- 480 ppm Exhaust PID- 628 pm Exhaust Temp- 150 °F Differential Pressure - 3.8 inH20 KO Tanklevel - 0.5 in. visible in glass Influent SVEO1 02 03 FLOW (SCFM) 83 10 25 48 Vac (in H2O) 5 in Hg 68 66 58 PID (ppm) 480 1,118 407 221 (Hy (ppm) 10 55 5 0 (xy (vo) 7.) HzS (ppm) 20.9 20.9 20.9 20.9 0.0 0.0 0.0 0\_0 CO (ppm) 0 0 0 0 CO2-(vol1.) -0.02 -0.02 -0.02 -0.02 CHy- KOLEL -7 -7 - 6 -7

Received CD: 1/15/2024 4:03:58 PM Location Sumray B 1B Date 10-4-23 23 Page 37 of 180 project / Client 0+M cont'd Greased the blover bearings Pass Replaced O-25 SCFM rotameter W/ O-50 on SVE 02 + 03 14:08- Hrs 249.6 14:30 - 0 Afsite

Released to Imaging: 4/9/2024 10:05:11 AM

Rite in the Rain.

Received by OCD: 1/15/2024 4:03:58 PM

Location Sunray BIB 24 Date 10-5-23 Project / Client HEC Summy & DB Truck/tools, PID, 6-yas, HVAS Sunny 80's 1130-Onsite for OtM. Review HASP, JSA System on trunning upon arrival. SVE Parameters @ 13:00 Total Flow - 79 serm Vac - 5 in. Hg 273.5 tlours Exhaust PID-661 ppm @ 14:00 Temp- 160 .F Diff. Pressure - 4.2 in H20 KOTank - 1.0 in visible in sight glass 01 Influent 02 03 Flow (SCKM) 9 79 22 48 Vac (in Hzl) 5 m. Ha 54 68 66 PID (ppm) 405 1,326 364 178 (H4 (ppm) 85 20 120 55 Oxy Stan) ". 20.9 20.9 20.9 20.9 HLS (ppm) 0.0 0.0 0.0 0.0 (0 (ppm) 0. 0 0 0 -changed oil in Roots Blower -changed Hz to 45.00 as NFD is over ownging. Colled Bryan For trouble shoot. He is on way. Released to Imaging: 4/9/2024 10:05:11 AM

Date 10-6-2 3 of 180 Received by OCD: 1/15/2024 4:03:58 PM Location Junray BIB Sunny, 80's Project / Client HEC Truck/tools, HVAS, PLD, 6-Gas NB 1030-Onsite for OHM System on trunning upon arrival Still operating @ 45.00 Hz on VFD flrs @ 11:00 SVE Parameters 294.4 72 SEFM Total Flow in H2O 1:47 60.5 Nac ppm 641 Exhaust PID ·F 155 Tempin H2O 3.0 D.H. Pressure ٤. in sight glass. KO Tank 03 02 Influent SVEDI 40 22 10 Flow (SCFM) 72 52 66 66 Vac (in. H.O) 60.5 162 382 431 1,429 PID (ppm) 45 20 115 125 (My (ppm) 20.9 20.9 20.9 20.9 0x-1 (vol?.) 0.0 0.0 0.0 0.0 H2S (rem 0 0 0 0 CO (ppm) 1315- Influent 10-6-23 colleded. PID-529 Hilcorp will be re-doing electrical to address Hz issues on elec. motor. 312 - Offsite Rite in the Rain.

Released to Imaging: 4/9/2024 10:05:11 AM

Location Sunray B 1B Date 10-12-23 Project / Chent HEC Windy 60s DB Truck, HVAS, PID, 6-gas 1230 - Onste for weeky OtM. HASP+JSA. Bryan & Chuck onsite Finishing electrical setup. At the power pole source any they sterped up voltage to 420 V and then stipped in back down to 240V at the site control pomel System off until they finish. -KO Tank ~ 6" in sight tube, approx 75%. of tube filled. -Drained approx 13 gallons 1320-Start SVE system back up. Running @ 60 Hz max equacity. Amperages appers steady + below motor specs maximum. Blower exhaust is a notably londer -HEC claims to have ordered a different muffler (some as @ 41A) to help reduce noise. 0:1 -Bleed value seems to be leaking with increased load/60 t12. How to Records Indias: 4/2024 10:05: 110 yels next oth wisit.

Received by OCD: 1/15/2024 4:03:58 PM Page 41 of 180 Date 10-12-23 5 Location Juntary OfM cont'd Project / Client

SVE Parameters @ 13:45 74.5 Total Flow SCFM -80 Vac in H2O Exhaust PID ppm 414 Temp 4 - 175 Diff. Pressure in Had - 5.3 KO Tank - empty. 03 02 SVEDI Influent 50 8.5 16 74.5 Flow sefm 52 72 76 80 VAC in H2U 116 134 415 356 PID ppm 450 920 20.9 540 2,450 CHa ppm 20.9 20.9 20.9 Oxy vol?. 0.0 0.0 0.0 6.0 H2S ppm 0 0 0 0 CO(pm 0.14 0.10 0.18 0.20 V61% CO2 5 1. LEL -4 (Hy collecte 10-12-23 1420 - Influent PID - 357 1445 - Offsite -

Released to Imaging: 4/9/2024 10:05:11 AM

Rete in the Rain.

Location Sunray BIB Date 10-19-23 ed by OCD: 1/15/2024 4:03:58 PM Project, Client HEC Sunny, 80, DB Truck, HVAS, PID, 6-gas 1130 - Onsite for weekly OMM HASD + 354 System running upon arrival. @ 12:00 SVE Parameters Total Flow (FCFM) - 74 (SinHa) Vac (in. H20) - 81.0 Exhaust PID (ppm) - 840 Temp (F) - 190 lemp (F) - 190 Diff. Pressure (in. Mel) - 5.7 O-10 mag. KO Tank - 5½" vrsible in sight tube. SVE01 Influent 02 03 Flow 14 74 10 450 SLFM 70 -55 81 70 Vac inHzU PID 399 672 288 131 PPM CHM 630 450 730 ppm 1,700 Oxy Vol% 20.9 20.9 20.9 20.9 ths ppm 0.0 0.0 0.0 0.0 CO 0.1 ppm 0 0 Ó Oz vol% 0,00. 0.10 0.08 0.08 Ctly 1. LEL 7 8 B 6 1235-Influent 10-19-23 collected. 1245- Alert HEC about shut down for oth **Released to Imaging: 4/9/202** 

Received by OCD: 1/15/2024 4:03:58 PM Page 43 of 180

Date 10-19-23 Location Sunray B1B Project / Client Of M contid Flushed lines by opening J-plugs on top to remove light from lines & rotameters Start w) 01, then 03 and 02 last to get most light ds. 1250-Shut down SNE system. -Drain approx 12 gul from KO touk. Light Brown oraque liquid w/ 1t. brown sheen. Some PSH separation towards end. Influent -cleaned up oil residue by 10-19-23 74 blower 81 364 r touch of new - added 850 011 20.9 0.0 -greased bearings 0 0.12 1335-restart system L- HRS @580.1 7 Running @ 60.00 Hz 1345 + Off site Rite in the Rain Released to Imaging: 4/9/2024 10:05:11 AM

Received by OCD: 1/15/2024 4:03:58 PM 8 Location Sunray BIB Page 44 of 180 Date 10/26/2023 Project / Client Hilcorp, SOF, light wind, Sunny GMC 1500, PID, 6-965, 4-995, PID, HVAS 0730 Left Office 0800 Goot gas and put air in rour left fire 0845 Arrived onsite. Complete TSA, Calibrate PID w/ 100 ppm 130 Sutylene Begin D+M and Sumpling, notes Collected on Oth Form-System running upon arrival Offile 1010 10/26/2023 Released to Imaging: 4/9/2024 10:05:11 AM

Received by OCD: 1/15/2024 4:03:58 PM

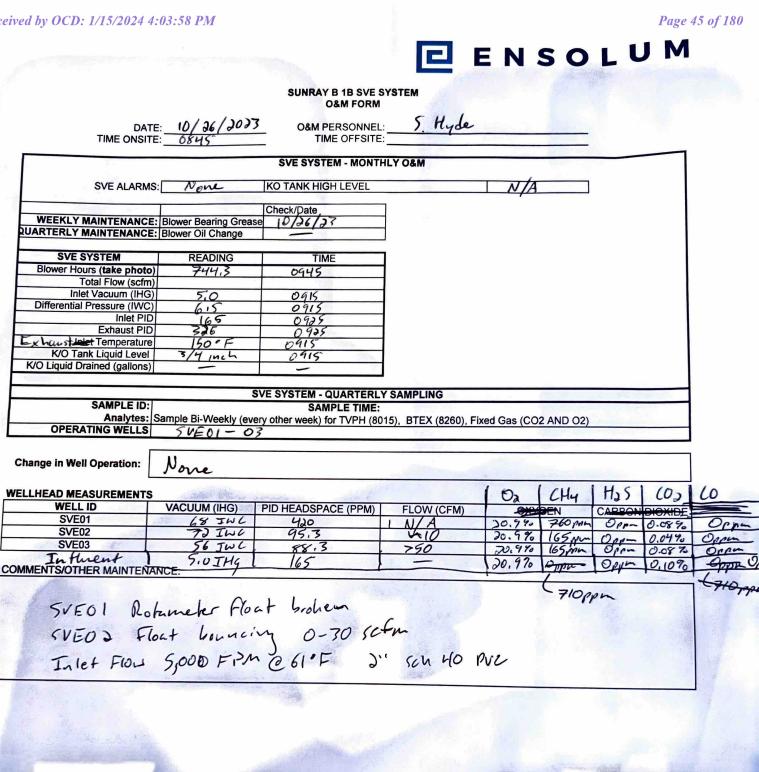
SVE SYSTEM

WELL ID

SVE01

SVE02

SVE03



Received by OCD: 1/15/2024 4:03:58 PM Page 46 of  $180_{\odot}$ Location Survey B 1B Date W-31-23 Project / Client Shay 60° truck, PID, 6-305, 4-305, HUAS, Simple kit 1400 onsite for Oth and sampling JSA sigel - System off upon arriva - spint tube RIII suspect KO hank Fill error, dramal 1x coder Volume Rom tank It. bown weat w/ steen PSH out and -turned system back on and rom for 30 must betere taking por meters or samply - rotain efor on SVE #1 broken 2x teller bag samples taken Survey B IB Inflent at 1530 1545 leaving site Released to Imaging: 4/9/2024 10:05:11 AM

the all

SVE SYSTEM     READING     TIME       Blower Hours (take photo)     3.7.2     1.4.20       Total Flow (scfm)     >.6%       Inlet Vacuum (IHG)     0.18       Differential Pressure (IWC)     5.6       Inlet PID     2.78       Exhaust PID     7.%2			Sin my	Response of the	ENS		. 0 1
SVE SYSTEM - MONTHLY O&M       SVE ALARMS:     KO TANK HIGH LEVEL       WEEKLY MAINTENANCE: Blower Bearing Grease       OUARTERLY MAINTENANCE: Blower Of Change       SVE SYSTEM       READING       TIME       Blower Hours (take photo)     3.7.2.1(2).20       Total Flow (scfm)       > 6.%       Differential Pressure (WC)     5.6       Exhaust PID     2.8       Sviaust PID     2.8       K/O Tank Liquid Level     KI       K/O Liquid Drained (gallons)     0       SVE SYSTEM - QUARTERLY SAMPLING       SAMPLE ID:       Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)			O&M FORM	4			
SVE ALARMS:       KO TANK HIGH LEVEL         WEEKLY MAINTENANCE:       Blower Bearing Grease         DUARTERLY MAINTENANCE:       Blower Oil Change         SVE SYSTEM       READING         Blower Hours (take photo)       43.7.2         Inlet Vacuum (IHG)       0.18         Differential Pressure (WC)       5.6         Exhaust PID       2%2         K/O Tank Liquid Level       6.9         K/O Liquid Drained (galions)       0         SVE SYSTEM - QUARTERLY SAMPLING	DATE: TIME ONSITE:	1400	O&M PERSONNE TIME OFFSIT	E Zach M	7 UT		
Check/Date         WEEKLY MAINTENANCE: Blower Bearing Grease         DUARTERLY MAINTENANCE: Blower Oil Change         SVE SYSTEM         READING       TIME         Blower Hours (take photo)       43.3.7.2.       14[.200         Total Flow (scfm)       > 6.%         Inlet Vacuum (IHG)       0.1       0.1         Inlet Vacuum (IHG)       0.1       0.1         Exhaust PID       2.6.       0.1         Exhaust PID       2.6.       0.1         K/O Tank Liquid Level       0.1       0.1         SVE SYSTEM - QUARTERLY SAMPLING       Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)			SVE SYSTEM - MON	THLY O&M			
WEEKLY MAINTENANCE:       Blower Bearing Grease       IQ-31-23         DUARTERLY MAINTENANCE:       Blower Oil Change         SVE SYSTEM       READING       TIME         Blower Hours (take photo)       43.7.2       IL[.20         Total Flow (sofm)       6.8       Inlet Vacuum (IHG)         Differential Pressure (IWC)       5.6       Inlet PID         Exhaust PID       7.52       Inlet PID         K/L	SVE ALARMS:		KO TANK HIGH LEVEL		1		
WEEKLY MAINTENANCE:       Blower Bearing Grease       IQ-31-23         UARTERLY MAINTENANCE:       Blower Oil Change         SVE SYSTEM       READING       TiME         Blower Hours (take photo)       43.7.2       IL(1,20)         Total Flow (softm)       > 6.%         Inlet Vacuum (IHG)       Q.1.8       Index of the soft of the			Check/Date				
SVE SYSTEM       READING       TIME         Blower Hours (take photo)       Colspan="2">Colspan="2"         Solspan="2"       Colspan="2"       Colspan="2"         Solspan="2"       Colspan="2"        Colspan="2"        Colspan="2"	WEEKLY MAINTENANCE:	Blower Bearing Grease		-			
Blower Hours (take photo)       437.2       1420         Total Flow (scfm)       > 6%         Inlet Vacuum (IHG)       0.18         Differential Pressure (IWC)       5.6         Exhaust PID       7 %2         Exhaust PID       7 %2         K/O Tank Liquid Level       KI         K/O Liquid Drained (gallons)       20         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         Analytes:       Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)							
Total Flow (scfm)       > 6 %         Inlet Vacuum (IHG)       0.18         Differential Pressure (IWC)       > 6         Exhaust PID       > 8         Exhaust PID       > 82         Exhaust PID       > 82         K/c St TimeTemperature       150° F         K/O Tank Liquid Level       150° F         K/O Liquid Drained (galions)       > 0         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         Analytes:       Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)	SVE SYSTEM	READING	TIME	7			
Total Flow (scfm)       > 6 %         Inlet Vacuum (IHG)       0.18         Differential Pressure (IWC)       > 6         Exhaust PID       > 8         Exhaust PID       7 % 2         Exhaust PID       7 % 2         K/o Tank Liquid Level       150° F         K/O Liquid Drained (gallons)       > 0         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         Analytes:       Sample Bi-Weekly (every other week) for TVPH (8015). BTEX (8260), Fixed Gas (CO2 AND O2)	Blower Hours (take photo)	637.2	1420	-			
Inlet Vacuum (IHG)       O. 18         Differential Pressure (IWC)       5.6         Inlet PID       7.82         Exhaust PID       7.82         Exhaust PID       7.82         K/o Tank Liquid Level       1.60° F         K/O Liquid Drained (gallons)       0         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         Analytes:       Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)	AA			-			
Inlet PID 228 Exhaust PID 782 Khrvst-HmeTemperature 150°F K/O Tank Liquid Level R.I K/O Liquid Drained (gallons) 20 SVE SYSTEM - QUARTERLY SAMPLING SAMPLE ID: SAMPLE ID: SAMPLE TIME: Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)	Inlet Vacuum (IHG)		the second	1			
Exhaust PID 782 Interview Interview ISO°F K/O Tank Liquid Level RI K/O Liquid Drained (gallons) 20 SVE SYSTEM - QUARTERLY SAMPLING SAMPLE ID: SAMPLE ID: Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)	Differential Pressure (IWC)	5.6		7			
Kite Stremperature       ISO°F         K/O Tank Liquid Level       R.I         K/O Liquid Drained (gallons)       R.I         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:       SAMPLE TIME:         Analytes:       Sample Bi-Weekly (every other week) for TVPH (8015).	Inlet PID	278		7			
Kink Street       ISO® F         K/O Tank Liquid Level       Kil         K/O Liquid Drained (gallons)       SVE SYSTEM - QUARTERLY SAMPLING         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         SAMPLE ID:         Analytes:         Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)				7			
K/O Tank Liquid Level       K/I         K/O Liquid Drained (gallons)       SVE SYSTEM - QUARTERLY SAMPLING         SVE SYSTEM - QUARTERLY SAMPLING         SAMPLE ID:         SAMPLE TIME:         Analytes:         Sample Bi-Weekly (every other week) for TVPH (8015). BTEX (8260), Fixed Gas (CO2 AND O2)	Chlorit Intel Temperature	10000					
SVE SYSTEM - QUARTERLY SAMPLING SAMPLE ID: SAMPLE TIME: Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)		KI.					
SAMPLE ID: SAMPLE TIME: Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)	K/O Liquid Drained (gallons)	20					
Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2)		SI	E SYSTEM - QUARTER	LY SAMPLING			
		Sample Ri Weekh (eve			Eved Gas (CO2	AND (12)	
			gould week for iven	5010), DILX (5200)	1 484 085 10021	000	
Change in Well Operation:	Change in Well Operation:						

WELLHEAD MEASUREMEN	NTS				
WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	5.3	348	rotanett Siekan	20.7	0.02
SVE02	5,1	215	18	20.9	0.0
SVE03	3.9	\$8.9	750	20.9	0.02

COMMENTS/OTHER MAINTENANCE: SVE OI rotainett broken attempted fix but needs robiement/parts - full tanke triggered shit of, draned ~ 20 gallins of Aurol

Received by OCD: 1/15/2024 4:03:58 PM

Page 48 of 180 B 1B Date 11-8-23 Location Sunray 10 Project / Client HEC DB Truck, HVAS, PID, multrgas 1315-Onsite for OAM. System running upon arrival 1345 SVE l'arameters @ 75 Total Flow SCFM -Vac IWC 76.8 75 6 76.8 (5 in Hg) 437 Exhaust PID ppm -145 Temp of Diff. Pressure. Iwc -6.32 KOTank- No visible liquids. SVE 01 Kotameter junked up w/ PSH and float/rod dislodged Take apart, clean + fix float assembly Needs rod holder replacement. - Purged liquids from rotameters Need U-10 use magnetic for Diff pressure - Need U-100 scen rota. Fir SVE03 - Greased blower bearings Released to Imaging: 4/9/2024 10:05:11 AM

Received by OCD: 1/15/202	24 4:03:58 PM
	Sumsen
Location	

Location \_\_\_\_\_

Date 11-8.23

Project / Client

OtM contid 03 OZ Inflat 01 750 16 9 75 Fbw SCFM 49 64 66 76.8 Vac Iwc 178 286 769 PID PPM 282 0 0 0 CHy IPM 202 20.2 OXY Vol!. HLS PPM CO PPM 20.0 20.2 vol% 0.0 0.0 0.0 00 0 0 0 0 0.04 0.09 0.08 0.04 CO2 vol%. - 8 -8 - 8 -10 7. LE CHy - Offsite 1500 Rite in the Rain.

Released to Imaging: 4/9/2024 10:05:11 AM

Date 11-16-23 Location SUNTRY B1B Received by OCD: 1/15 Project / Client \_\_\_\_ Zm, trucket tods, 4-50. 6-35, HAD, Sample kd, PID 1345 onsite for OtM and Samplin - PID colibrated at 41A JSA smed System ronning upon arrival, all values open Parometers on O+M form 2x tedlar bac somplar "Sunry BIB Influent" at 1420 -Notified operater and tried off system to grasse blover motor - drained 12 gallors brown water from knockost tank orange only residue at the last Sellon that had been floating on the top -All values open system on when leaving 1218, 3 hours -1450 leaving site Released to Imaging: 4/9/2024 10:05:11 AM

S	nra		0		NSC	LUM
DATE TIME ONSITE	1-16-23	SVE SYSTEM O&M FORM O&M PERSONNEL TIME OFFSITE	Zuch M	1705		
		SVE SYSTEM - MONTI	HLY O&M			
SVE ALARMS:	nore	KO TANK HIGH LEVEL		-		
WEEKLY MAINTENANCE: QUARTERLY MAINTENANCE:	Blower Bearing Grease Blower Oil Change	Check/Date				
SVE SYSTEM	READING	TIME	1			
Blower Hours (take photo)	1218.3	1430				
Total Flow (scfm)		1350				
Inlet Vacuum (IHG)	4.5					
Differential Pressure (IWC)	6.9					
Inlet PID	378	4	20.0 Jd %	02, 0.04	vd to CO2	
Exhaust PID	705				2	
Charlet Inlet Temperature K/O Tank Liquid Level	150°F					
K/O Liquid Drained (gallons)	1	1435				
(gallons)	1d	1 ( )0				
	SI	VE SYSTEM - QUARTERLY	SAMPLING			
SAMPLE ID:	Sunny B1R	B INTERTAMPLE TIME:	1420			
		other week) for TVPH (801	5), BTEX (8260), Fixed (	Gas (CO2 AND 02	2)	
OPERATING WELLS						

WELLHEAD MEASUREMEN	TS			vol	lo
WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	5.8	688	8	19.8	0.06
SVE02	4.6	515	15	6.9	0.02
SVE03	3.7	258	750	19.8	0.04

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COMMENTS/OTHER MAINTENANCE:

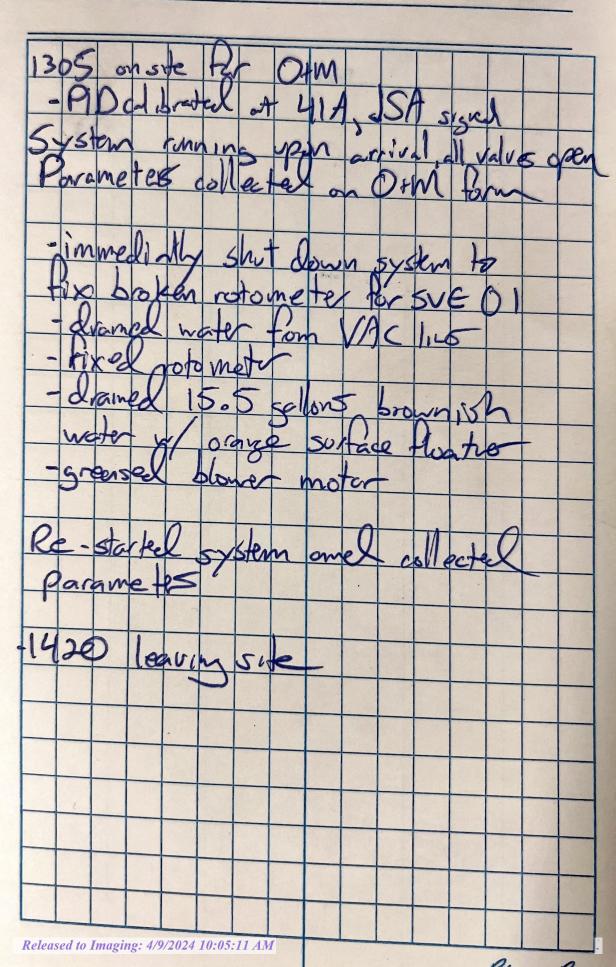
Change in Well Operation:

Received by OCD: 1/15/2024 4:03:58 PM 1 B

Page 52 of 180 Date 11-22-20

13

Project / Client



Received by OCD: 1/15/2024 4:03;58 PM

Sunp	w B	1B		EN	SOLUN
DAT	/ <u>= 11-22-23</u> <u>= 1305</u>	SVE SYSTEM O&M FORM	Zach / 1420	hjer	
		SVE SYSTEM - MONTH	LY O&M		
SVE ALARMS	A/a	KO TANK HIGH LEVEL		n/a	-
WEEKLY MAINTENANCE		Check/Date e   -22 —			
SVE SYSTEM	READING	TIME	¥ .		
Blower Hours (take photo	1,360.9	1315			
Total Flow (scfm	>78	1350			
Inlet Vacuum (IHG	5	1350			т.
Differential Pressure (IWC	6.5	1350			
Inlet PIC	127	1400	20.0 volg	602, O.O	0 (02
Exhaust PID	398	1310		2	
TX Wast Intel Temperature	150°F	1310			
K/O Tank Liquid Level	7" in tube	1310			
K/O Liquid Drained (gallons)	15.5	1345			
		8			
		SVE SYSTEM - QUARTERLY	SAMPLING		
SAMPLE ID:		SAMPLE TIME:			
Analytes:	Sample Bi-Weekly (eve	ery other week) for TVPH (80	15), BTEX (8260), Fixe	d Gas (CO2 AND O2)	
OPERATING WELLS					
Change in Well Operation:					
ELLHEAD MEASUREMENTS	8				
WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
	-	1107	10	1001	m and

WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	5	407	12	19.8	0.04
SVE02	88 5.7	156	16	20.0	0.00
SVE03	3.6	45,3	>50	20.0	0.02

Fixed broken rotometer on SVE01



Sunvay
DATE: 11-28-23
TIME ONSITE: 1355

SVE SYSTEM O&M FORM O&M PERSONNEL: Zach Myers TIME OFFSITE: 1445

		SVE SYSTEM - MONTH	LY O&M
SVE ALARMS:	-	KO TANK HIGH LEVEL	_
	Player Pooring Crosse	Check/Date	
WEEKLY MAINTENANCE: QUARTERLY MAINTENANCE:			
SVE SYSTEM	READING	TIME	]
Blower Hours (take photo)	71 -	1430	-
Total Flow (scfm)	115	1400	-
Differential Pressure (IWC	7.2	1400	
inlet PIC Exhaust PIC	220	1420	$22.2 \cdot 0.9.02$ 0.02 $\cdot 0.9.02$
	e 140°F	400	
	0.5" in sight the	1400	-
K/O Liquid Drained (gallons			
	,	SVE SYSTEM - QUARTER	RLY SAMPLING
SAMPLE ID	Suniay BIB	o In Fluent SAMPLE TIM	E: 1420
Analytes	Sample Bi-Weekly (e	very other week) for TVPH (	8015), BTEX (8260), Fixed Gas (CO2 AND O2)
OPERATING WELL	s ( , , , >		

Change in Well Operation:

/

#### WELLHEAD MEASUREMENTS

WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	4.6	453	7.5	20.2	0.04
SVE02	4.4	43.1	19	20.2	0.02
SVE03	3.5	148	>50	20.2	0.00

COMMENTS/OTHER MAINTENANCE:

14 Location Survey BJB Page 55 of 180 Date 11-28-23 Project / Client 1355 ZM onsite For O+M and sampling -PID calibrated at #414 E System running all values open F Parameters cottected on O+M for Dramed 3.5 gillors from KO tank Gensel Hower Moter 2x tedler bag smple "Surry BIB Influert" 1445 leaving site - 1 Released to Imaging: 4/9/2024 10:05:11 AM

Received by OCD: 1/15/2024 4:03:58 PM

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	ray B	SVE SYST	M		
DA.	TE 12/7/23	O&M PERSONN TIME OFFSI	F. Recc	Hansun	
TIME ONSI	P;55	TIME OFFSI	TE: 12:15		
		SVE SYSTEM - MON	THLY O&M		
SVE ALARM	s:	KO TANK HIGH LEVEL			
			_		
		Check/Date			
	E: Blower Bearing Grea	ase / 12/7/23			
RLY MAINTENANCI	E: Blower Oil Change	NA			
			Г		
SVE SYSTEM	READING	TIME	02 03	01	
er Hours (take photo Total Flow (scfm	+74	10:23	187 75		
Inlet Vacuum (IHG	L	10:17			
ential Pressure (IWC	- 1.	10:20	02 (	2	
Inlet PI	Oar	11:35	617.6	D.02	
Exhaust PID		11:40			
Inlet Temperature	MA	NA			
VO Tank Liquid Level	Half of s:	r tube			
quid Drained (gallons)	~ 0	11:50	]		
		SVE SYSTEM - QUARTERL			
SAMPLE ID:	104	SAMPLE TIME:	70 ° F		
PERATING WELLS	U(,02,	ery other week) for TVPH (80	пэ), втех (6200), г.	LEU Gas (CO2 AND C	<u></u>
n Well Operation:	leave all	wells open	1		
D MEASUREMENTS		1		1	
WELL ID	VACUUM (IHG)		FLOW (CFM)		CARBON DIOXIDE
SVE01	58	430	8	19.6	0.02
SVE02	56	45	18	19.6	0.02
SVE03	-11	7	>50	19.6	0.02
SOTHER MAINTEN		t re-do h			-

Date 12/7, Page 57 of 180 Received by OCD: 1/15/2024 4:03:58 PM Location Sunray B13 Project / Client H: Corp RIF, Track/tools, PID, HVAS, Eagle, 4-90) 9:35-RH on Sik For OHM - Calibrate BID w/ 100 ppm Is.b. tylene - System running on arrival - fill out + sign JSA - fill all Tellar bags for headspace mlet readings - seen low - tranble shout Hyt HVAS -repair of re-pull fedlar bass for readings - See form for all parameter) 12:15 - RH ,FF Sik

Released to Imaging: 4/9/2024 10:05:11 AM

Rite in the Run

Received by OCD: 1/15/2024 4:03:58 PM

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uhray E	/	SVE SYSTEM	
		O&M FORM	
DATE	12.13.23	O&M PERSONNEL	Zach Myps
TIME ONSITE:	1220	TIME OFFSITE:	305
		SVE SYSTEM - MONTH	LY O&M
SVE ALARMS:	_	KO TANK HIGH LEVEL	
		Check/Date	
	Diana Diana Consta	12-17	
WEEKLY MAINTENANCE:		~	
UARTERLY MAINTENANCE:	Blower Oil Change		1
			I
SVE SYSTEM	READING	Тіме	
Blower Hours (take photo)	1250	1855.0	
Total Flow (scfm)	>85	1230	
	4.5	1230	
Inlet Vacuum (IHG)	( Q	1230	
Differential Pressure (IWC)	6.1		19711140 000 00
		1240	
Inlet PID	165		19.3 Vol 4 02 0.02 CC
	207	1225	
Inlet PID Exhaust PID	287		
Inlet PID Exhaust PID	287	1225	
Inlet PID Exhaust PID Cr Infet Temperature K/O Tank Liquid Level	287	1225 1230 1230	2,0.02
Inlet PID Exhaust PID	287	1225	2,0.02
Inlet PID Exhaust PID Cr Infet Temperature K/O Tank Liquid Level	287	1225 1230 1230	
Inlet PID Exhaust PID Exhaust PID Inter Temperature K/O Tank Liquid Level K/O Liquid Drained (gallons)	287 135°F 0.5" 3.5	1225 1230 1230 1255 SVE SYSTEM - QUARTERL	Y SAMPLING
Inlet PID Exhaust PID Exhaust PID Inter Temperature K/O Tank Liquid Level K/O Liquid Drained (gallons) SAMPLE ID:	287 135°F 0.5" 3.5 Sunry BIB In	1225 1230 1230 1255 SVE SYSTEM - QUARTERL front SAMPLE TIME:	YSAMPLING 1240
Inlet PID Exhaust PID Exhaust PID Inter Temperature K/O Tank Liquid Level K/O Liquid Drained (gallons) SAMPLE ID:	287 135°F 0.5" 3.5 Sunry BIB In	1225 1230 1230 1255 SVE SYSTEM - QUARTERL front SAMPLE TIME:	Y SAMPLING

WELLHEAD MEASUREMEN	TS			Val	%
WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	4.4	405	10	19.3	0.02
SVE02	4.2	107	25	19.3	0.00
SVE03	3.7	175	>50	19.3	0.02

comments/other maintenance: greased blower motor

Received by OCD: 1/15/2024 4:03:58 PM 16 Location SM (ay BB Page 59 of 180 Date 2-13-23 Project / Client 1220 onsite or SVE gystem O+M and sampling - JSA siged PID calbatel at #41 A · System running upon arrival Parometers on 0+M form 1855.0 hours at 1250 Operator notified and system shot down to grease blower motor and drom 3.5 gollars of liquid from KO tank 2x tedler bag sample taken at 1240 "Sunray BIB Influent" PID 165 ppn 1305 leaving site Released to Imaging: 4/9/2024 10:05:11 AM

# E ENSOLUM

#### SUNRAY B 1B SVE SYSTEM O&M FORM

DATE: TIME ONSITE:	12-20-23	O&M PERSONNEL:	D. Burns		_
		SVE SYSTEM - MONTHL	Y O&M		
SVE ALARMS:	NA	KO TANK HIGH LEVEL			-
		Check/Date			_
WEEKLY MAINTENANCE: UARTERLY MAINTENANCE:	Blower Bearing Grease Blower Oil Change				
SVE SYSTEM	READING	TIME			
Blower Hours (take photo) Total Flow (scfm)	2021.5	1130			
Inlet Vacuum (IHG) Differential Pressure (IWC)	4.5				
Inlet PID	7.1				
EX InterTemperature	287				
K/O Tank Liquid Level K/O Liquid Drained (gallons)	NA				
	, , , , , , , , , , , , , , , , , , ,				
SAMPLE ID:	S	VE SYSTEM - QUARTERLY SAMPLE TIME:	SAMPLING		
Analytes: OPERATING WELLS	Sample Bi-Weekly (eve	ery other week) for TVPH (801	5), BTEX (8260), Fixe	d Gas (CO2 AND C	2)
Change in Well Operation:	None				
VELLHEAD MEASUREMENT					
SVE01	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01 SVE02	4.4		12		_
SVE02 SVE03	24		24		
COMMENTS/OTHER MAINTER			86	in the second	
ZOWALLY OF THEIR MAINTER					

Inlet 0% LEL 19.0 Oxy vol'L . O. oppon Has O ppm CO 0.04 w1% co2 -5%. CH4-

Received by OCD: 1/15/2024 4:03:58 PM Page 61 Location Sunray B1B Date 12-28 Project / Client Hilcorp Zm, truch, 4-55, 635, 4V/S, PID 1330 Onsite for OHM and somptime -encountered Hilcorp employee Chuch who was making some electrical system changes to SUE system tind down from 60 Hz to 50 Hz to make heating elements function better - volume of system is significantly lower System running pon arrun 2181.4 hours it 34: PID calibrated at #414 Parametes recorded on Oth form System shit down to gree blow motiv 2x teller Las 505 sample "Surray BIB / hunt at 1425 1435 leaving site m Released to Imaging: 4/9/2024 10:05:11 AM



SVE SYSTEM Sunray **O&M FORM** ach M -28 O&M PERSONNEL DATE 1439 TIME ONSITE: 330 TIME OFFSITE: SVE SYSTEM - MONTHLY O&M \_ KO TANK HIGH LEVEL SVE ALARMS: Check/Date WEEKLY MAINTENANCE: Blower Bearing Grease QUARTERLY MAINTENANCE: Blower Oil Change SVE SYSTEM READING TIME 2181.4 346 Blower Hours (take photo) > Total Flow (scfm) Inlet Vacuum (IHG) Ĺ Differential Pressure (IWC) 38 Inlet PID 29 Exhaust PID 115 -Inlet-Temperature KO Tank Liquid Level 2" in Sight tu K/O Liquid Drained (gallons) U SVE SYSTEM - QUARTERLY SAMPLING SAMPLE TIME: 1425 SAMPLE ID: Analytes: Sample Bi-Weekly (every other week) for TVPH (8015), BTEX (8260), Fixed Gas (CO2 AND O2) 3 OPERATING WELLS Change in Well Operation: WELLHEAD MEASUREMENTS

TELEVIDAD MEROONEMENT	•				1
WELL ID	VACUUM (IHG)	PID HEADSPACE (PPM)	FLOW (CFM)	OXYGEN	CARBON DIOXIDE
SVE01	3.6	20.4	9	19.3	0.04
SVE02	APM 3.2	43.9	18	19.3	0.02
SVE03	2.6	34.4	>50	19.3	0.041

COMMENTS/OTHER MAINTENANCE

gravel boner motor



APPENDIX C

**Project Photographs** 

#### PROJECT PHOTOGRAPHS Sunray B 1B San Juan County, New Mexico Hilcorp Energy Company

Photograph 1 Runtime meter taken on September 29, 2023 at 11:29 AM Hours = 126.8	Sunray Blb
Photograph 2 Runtime meter taken on December 28, 2023 at 1:38 PM Hours = 2,181.4	OLISS Same ULARTZ LIBIE HOURD



# APPENDIX D

Laboratory Analytical Reports



September 14, 2023

Mitch Killough HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Sunray B 1B

OrderNo.: 2308G06

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/30/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B 1B

**Project:** 

**Analytical Report** Lab Order 2308G06

Date Reported: 9/14/2023

	Hall	Environmental	Analysis	Laboratory.	Inc.
--	------	---------------	----------	-------------	------

Client Sample ID: Influent 8/29/23 Collection Date: 8/29/2023 2:20:00 PM Received Date: 8/30/2023 6:30:00 AM

Lab ID: 2308G06-001	Matrix: AIR	<b>Received Date:</b> 8/30/2023 6:30:00 AM						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed			
EPA METHOD 8015D: GASOLINE RANG	3E				Analyst: JJP			
Gasoline Range Organics (GRO)	5900	500	µg/L	100	9/7/2023 3:35:23 PM			
Surr: BFB	124	15-412	%Rec	100	9/7/2023 3:35:23 PM			
EPA METHOD 8260B: VOLATILES					Analyst: CCN			
Benzene	18	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Toluene	190	5.0	μg/L	50	9/11/2023 3:25:00 PM			
Ethylbenzene	6.8	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Methyl tert-butyl ether (MTBE)	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
1,2,4-Trimethylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
1,3,5-Trimethylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
1,2-Dichloroethane (EDC)	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
1,2-Dibromoethane (EDB)	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Naphthalene	ND	10	µg/L	50	9/11/2023 3:25:00 PM			
1-Methylnaphthalene	ND	20	µg/L	50	9/11/2023 3:25:00 PM			
2-Methylnaphthalene	ND	20	μg/L	50	9/11/2023 3:25:00 PM			
Acetone	ND	50	µg/L	50	9/11/2023 3:25:00 PM			
Bromobenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Bromodichloromethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Bromoform	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Bromomethane	ND	10	µg/L	50	9/11/2023 3:25:00 PM			
2-Butanone	ND	50	μg/L	50	9/11/2023 3:25:00 PM			
Carbon disulfide	ND	50	μg/L	50	9/11/2023 3:25:00 PM			
Carbon tetrachloride	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Chlorobenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Chloroethane	ND	10	µg/L	50	9/11/2023 3:25:00 PM			
Chloroform	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
Chloromethane	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
2-Chlorotoluene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
4-Chlorotoluene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
cis-1,2-DCE	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
cis-1,3-Dichloropropene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
1,2-Dibromo-3-chloropropane	ND	10	μg/L	50	9/11/2023 3:25:00 PM			
Dibromochloromethane	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
Dibromomethane	ND	10	µg/L	50	9/11/2023 3:25:00 PM			
1,2-Dichlorobenzene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
1,3-Dichlorobenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM			
1,4-Dichlorobenzene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
Dichlorodifluoromethane	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
1,1-Dichloroethane	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			
1,1-Dichloroethene	ND	5.0	μg/L	50	9/11/2023 3:25:00 PM			

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

**Qualifiers:** 

Analyte detected in the associated Method Blank в

Е

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

Sample Diluted Due to Matrix

% Recovery outside of standard limits. If undiluted results may be estimated. S

Value exceeds Maximum Contaminant Level.

Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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**CLIENT: HILCORP ENERGY** 

Sunray B 1B

**Project:** 

**Analytical Report** Lab Order 2308G06

Date Reported: 9/14/2023

Hall Environmental	Analysis	Laboratory,	Inc.
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Client Sample ID: Influent 8/29/23 Collection Date: 8/29/2023 2:20:00 PM **Received Date:** 8/30/2023 6:30:00 AM

Lab ID: 2308G06-001	Matrix: AIR	<b>Received Date:</b> 8/30/2023 6:30:00 AM					
Analyses	Result	RL Qual Units		DF	Date Analyzed		
EPA METHOD 8260B: VOLATILES					Analyst: CCM		
1,2-Dichloropropane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,3-Dichloropropane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
2,2-Dichloropropane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,1-Dichloropropene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Hexachlorobutadiene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
2-Hexanone	ND	50	µg/L	50	9/11/2023 3:25:00 PM		
Isopropylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
4-Isopropyltoluene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
4-Methyl-2-pentanone	ND	50	µg/L	50	9/11/2023 3:25:00 PM		
Methylene chloride	ND	15	µg/L	50	9/11/2023 3:25:00 PM		
n-Butylbenzene	ND	15	µg/L	50	9/11/2023 3:25:00 PM		
n-Propylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
sec-Butylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Styrene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
tert-Butylbenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Tetrachloroethene (PCE)	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
trans-1,2-DCE	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
trans-1,3-Dichloropropene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,2,3-Trichlorobenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,2,4-Trichlorobenzene	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,1,1-Trichloroethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,1,2-Trichloroethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Trichloroethene (TCE)	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Trichlorofluoromethane	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
1,2,3-Trichloropropane	ND	10	µg/L	50	9/11/2023 3:25:00 PM		
Vinyl chloride	ND	5.0	µg/L	50	9/11/2023 3:25:00 PM		
Xylenes, Total	58	7.5	µg/L	50	9/11/2023 3:25:00 PM		
Surr: Dibromofluoromethane	87.0	70-130	%Rec	50	9/11/2023 3:25:00 PM		
Surr: 1,2-Dichloroethane-d4	79.2	70-130	%Rec	50	9/11/2023 3:25:00 PM		
Surr: Toluene-d8	120	70-130	%Rec	50	9/11/2023 3:25:00 PM		
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	50	9/11/2023 3:25:00 PM		

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

- Analyte detected in the associated Method Blank в
- Above Quantitation Range/Estimated Value Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### ANALYTICAL SUMMARY REPORT

September 14, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D			
Work Order: Project Name:	B23090042 G Not Indicated	Quote ID: B15626		
Energy Laborato	ories Inc Billings MT receive	ed the following 1 sample for Ha	all Environmen	tal on 9/1/2023 for analysis.
Lab ID	Client Sample ID	Collect Date Receive Date	e Matrix	Test
B23090042-001	2308G06-001B, Influent 8/29/23	t 08/29/23 14:20 09/01/23	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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:Hall EnvironmentalProject:Not IndicatedLab ID:B23090042-001Client Sample ID:2308G06-001B, Influent 8/29/23

Report Date: 09/14/23 Collection Date: 08/29/23 14:20 DateReceived: 09/01/23 Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	DEDODT						
Oxygen	18.38	Mol %		0.01		GPA 2261-95	09/05/23 12:54 / jrj
Nitrogen	77.18			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Carbon Dioxide	-	Mol %		0.01		GPA 2261-95	09/05/23 12:54 / jrj
Hydrogen Sulfide	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Methane	< 0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Ethane	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Propane	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Isobutane	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
n-Butane	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Isopentane	<0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
n-Pentane	< 0.01			0.01		GPA 2261-95	09/05/23 12:54 / jrj
Hexanes plus		Mol %		0.01		GPA 2261-95	09/05/23 12:54 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 12:54 / jrj
Isobutane	< 0.001			0.001		GPA 2261-95	09/05/23 12:54 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 12:54 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 12:54 / jrj
n-Pentane	< 0.001			0.001		GPA 2261-95	09/05/23 12:54 / jrj
Hexanes plus	0.088	gpm		0.001		GPA 2261-95	09/05/23 12:54 / jrj
GPM Total	0.088	gpm		0.001		GPA 2261-95	09/05/23 12:54 / jrj
GPM Pentanes plus	0.088			0.001		GPA 2261-95	09/05/23 12:54 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	10			1		GPA 2261-95	09/05/23 12:54 / jrj
Net BTU per cu ft @ std cond. (LHV)	9			1		GPA 2261-95	09/05/23 12:54 / jrj
Pseudo-critical Pressure, psia	561			1		GPA 2261-95	09/05/23 12:54 / jrj
Pseudo-critical Temperature, deg R	252			1		GPA 2261-95	09/05/23 12:54 / jrj
Specific Gravity @ 60/60F	1.02			0.001		D3588-81	09/05/23 12:54 / jrj
Air, % - The analysis was not corrected for air.	83.97			0.01		GPA 2261-95	09/05/23 12:54 / jrj

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 09/05/23 12:54 / jrj



1:03:58 PM Inust our People. Trust our Data. www.energylab.com Billings, MT 406.252.6325 • Casper, WY 307.435.051.5/ 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Report Date: 09/14/23

## **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client:	Hall Environmental	Work Order: B23090042
•		

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261-95									Batch:	R408198
Lab ID: LCS090523	11 Lat	poratory Col	ntrol Sample			Run: GCNG	A-B_230905A		09/05/	/23 11:08
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		5.99	Mol %	0.01	100	70	130			
Carbon Dioxide		1.01	Mol %	0.01	102	70	130			
Methane		74.6	Mol %	0.01	100	70	130			
Ethane		6.10	Mol %	0.01	102	70	130			
Propane		4.92	Mol %	0.01	100	70	130			
Isobutane		2.00	Mol %	0.01	100	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		1.00	Mol %	0.01	100	70	130			
n-Pentane		1.00	Mol %	0.01	100	70	130			
Hexanes plus		0.78	Mol %	0.01	98	70	130			
Lab ID: B23090041-001ADUP	12 Sa	mple Duplic	ate			Run: GCNG	A-B_230905A		09/05/	/23 12:16
Oxygen		21.7	Mol %	0.01				0	20	
Nitrogen		78.1	Mol %	0.01				0	20	
Carbon Dioxide		0.26	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	

ENERGY LABORATORIES

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# Work Order Receipt Checklist

### Hall Environmental

B23	090	042
		• •

Login completed by:	ompleted by: Richard L. Shular		Date Received: 9/1/2023		
Reviewed by:	darcy		Received by: car		
Reviewed Date:	9/9/2023	Carrier name: FedEx			
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all sa	ample 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 CI, Sulfite, Ferrous Iron, etc.)		Yes 🗹	No 🗌		
Temp Blank received in all shipping container(s)/cooler(s)?		Yes	No 🗹	Not Applicable	
Container/Temp Blank tempe	erature:	21.0°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

teceiveu by OCD. 1/13	/2024 4.03.3		t -
Hall Environmental Anafysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 7EL: 505-345-4107 Website: vrvvt.hallenvironmental.com	(406) 252-6069	ANALYTICAL COMMENTS	B23090042
	FAX: EMAIL:	NALYTIG	C02+02
ан <mark>о</mark> н 1 а	(406) 869-6253	≠ CONTAINERS	1 Natural Gas Analysis. CO2+02
CUSTODY RECORD PAGE	PHONE.	COLLECTION DATE	8/29/2023 2:20:00 PM
USTODY	ttories	LE MATRIX	Air
CHAIN OF C	Energy Laboratories	BOTTLE TYPE	TEDLAR
HALL ENVIRONMENTAL ANALYSIS LABORATORY	CONTRATOR Energy Labs -Billings COMPANY RESS 1120 South 27th Street (STATE, ZIP Billings, MT 59107	M SAMPLE CLIENT SAMPLE ID	2308G06-001B Influent 8/29/23
TAL	COMPANY	APLE ID	

Received by OCD: 1/15/2024 4:03:58 PM

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HALL ENVIRON ANALYSI LABORA		Alb. TEL: 505 <b>-34</b> 5-3975	Analysis Laboratory 4901 Hawkins NE uquerque, NM 87109 5 FAX: 505-345-4107 Illenvironmental.com	San	nple Log-In Check List
Client Name: HI	LCORP ENERGY	Work Order Number	: 2308G06		RcptNo: 1
Received By: T	racy Casarrubias	8/30/2023 6:30:00 AM			
	racy Casarrubias	8/30/2023 6:59:48 AM			
Reviewed By:	M 8-30-23	0/30/2023 0.39.46 ANI			
Chain of Custo	du				
1. Is Chain of Custo			Yes	No 🔽	Not Present
2. How was the sar			<u>Courier</u>		
Log In 3. Was an attempt	made to cool the samples	?	Yes 🗌	No 🗌	NA 🗹
4. Were all samples	received at a temperatur	e of >0° C to 6.0°C	Yes	No 🗌	NA 🗹
5. Sample(s) in prop	per container(s)?		Yes 🔽	No 🗌	
6. Sufficient sample	volume for indicated test	(s)?	Yes 🔽	No 🗌	
7. Are samples (exc	ept VOA and ONG) prope	erly 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	e containers received brol	ken?	Yes	No 🔽	
11. Does paperwork			Yes 🗹	No 🗌	# of preserved bottles checked for pH:
	ies on chain of custody)	Custo 4-2	Yes 🗹	No 🗌	(<2 or >12 unlese noted) Adjusted?
	ectly identified on Chain on alyses were requested?	of Custody?	Yes ⊻ Yes ⊻		
	times able to be met?		Yes 🗹		enecked by: 1~8/30/23
-	omer for authorization.)				
Special Handling	g (if applicable)				
15. Was client notifie	ed of all discrepancies wit	h this order?	Yes 🗌	No 🗌	NA 🗹
Person No	tified:	Date:			
By Whom:		Via: [	eMail Phon	e 🗌 Fax	In Person
Regarding					
Client Instr	ructions: Mailing address	phone number and Email	/ Fax are missing o	n COC- TN	1Č 8/30/23
16. Additional rema	rks:				
	Temp °C Condition	Seal Intact Seal No S	Seal Date Sig	ned By	
Page 1 of 1					Page 9 of 10

Page 74 of 180

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Page 75 of 180	HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	Albuquerque, NM 87109	Fax 505-345-4107	Analysis Request	()na		л Дие Чие	()		V-i	məð	8260 (/ 8270 (5 5) 0728 7) 0729 7) 0729 7029 7029 7029 7029 7029 7029 7029									mary mary		clearly notated on the analytical report.
	HALLE	ANALYS	www.hallenv	4901 Hawkins NE - Alb	Tel. 505-345-3975	Analy	(0)	SIMS CB's	502 d 7	10 ( 808 (1.4) (1.4)	ןs ס סו 20 גפ אכ	S)(G od 31( 31(	151 by 8 by 8 M 8	втех / 1PH:80 8081 Pd PAHs b PAHs b RCRA b RCRA b RCRA b									Remarks: Jburns CC: Jburns	dhenemen a	ossibility. Any sub-contracted data will b
	Turn-Around Time:	X Standard 🗆 Rush			Project #:		Project Manager:	Struct Hyde		1: Danny Burns	TYes NO		Cooler Temp(Including cF): N//A (°C)	Container Preservative HEAL No. Type and # Type	NAL CONT	Cricaly Not 001		X					Received by: Via: Date Time F	Received by: Vier Caldwy Date/ Time	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.
	Chain-of-Custody Record	Energy Company	-					-	Level 4 (Full Validation)	npliance				Sample Name	60 00	LANTINENT BILDICS					7		sheed by:	nning h nn k	when the de Hall Environmental may be subo
Received by OCD: 1/15/2024 4:03:58 PM	Chain-of-C	Client: Hil Corr	Athin Mitch	Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	Standard	u:	DINELAC Dother	EDD (Type)		Date Time Matrix	<b>J</b>	1. A m. H m. 42-8						age	Date Time: Reinquished by	Date: Time: Relinquished by: Big/b3 n-1 0 0000	If necessary, semples s



September 14, 2023

Stuart Hyde HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Sanroy B1B

OrderNo.: 2308H03

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/31/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sanroy B1B

2308H03-001

**Project:** 

Lab ID:

Analytical Report Lab Order 2308H03

	Hall	Environmental	A I	nalysis	Lab	oratory	, Inc.
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Matrix: AIR

Date Reported: 9/14/2023

Client Sample ID: Influent 8-30 Collection Date: 8/30/2023 4:00:00 PM Received Date: 8/31/2023 6:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: CCN
Benzene	10	10	µg/L	100	9/11/2023 3:50:00 PM
Toluene	230	10	µg/L	100	9/11/2023 3:50:00 PM
Ethylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Methyl tert-butyl ether (MTBE)	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2,4-Trimethylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,3,5-Trimethylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2-Dichloroethane (EDC)	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2-Dibromoethane (EDB)	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Naphthalene	ND	20	µg/L	100	9/11/2023 3:50:00 PM
1-Methylnaphthalene	ND	40	µg/L	100	9/11/2023 3:50:00 PM
2-Methylnaphthalene	ND	40	µg/L	100	9/11/2023 3:50:00 PM
Acetone	ND	100	µg/L	100	9/11/2023 3:50:00 PM
Bromobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Bromodichloromethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Bromoform	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Bromomethane	ND	20	µg/L	100	9/11/2023 3:50:00 PM
2-Butanone	ND	100	µg/L	100	9/11/2023 3:50:00 PM
Carbon disulfide	ND	100	µg/L	100	9/11/2023 3:50:00 PM
Carbon tetrachloride	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Chlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Chloroethane	ND	20	µg/L	100	9/11/2023 3:50:00 PM
Chloroform	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Chloromethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
2-Chlorotoluene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
4-Chlorotoluene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
cis-1,2-DCE	ND	10	µg/L	100	9/11/2023 3:50:00 PM
cis-1,3-Dichloropropene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2-Dibromo-3-chloropropane	ND	20	µg/L	100	9/11/2023 3:50:00 PM
Dibromochloromethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Dibromomethane	ND	20	µg/L	100	9/11/2023 3:50:00 PM
1,2-Dichlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,3-Dichlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,4-Dichlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Dichlorodifluoromethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1-Dichloroethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1-Dichloroethene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2-Dichloropropane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,3-Dichloropropane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
2,2-Dichloropropane	ND	10	µg/L	100	9/11/2023 3:50:00 PM

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

Qualifiers:

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

 PQL
 Practical Quanitative Limit

 S
 % Recovery outside of standard limits. If undiluted results may be estimated.

Value exceeds Maximum Contaminant Level.

Holding times for preparation or analysis exceeded

Sample Diluted Due to Matrix

Not Detected at the Reporting Limit

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ND

**CLIENT: HILCORP ENERGY** 

Sanroy B1B

2308H03-001

**Project:** 

Lab ID:

**Analytical Report** Lab Order 2308H03

Hall Environmental Analysis Labora	atory,	Inc.
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Date Reported: 9/14/2023

Client Sample ID: Influent 8-30 Collection Date: 8/30/2023 4:00:00 PM Received Date: 8/31/2023 6:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: CCM
1,1-Dichloropropene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Hexachlorobutadiene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
2-Hexanone	ND	100	µg/L	100	9/11/2023 3:50:00 PM
Isopropylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
4-Isopropyltoluene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
4-Methyl-2-pentanone	ND	100	µg/L	100	9/11/2023 3:50:00 PM
Methylene chloride	ND	30	µg/L	100	9/11/2023 3:50:00 PM
n-Butylbenzene	ND	30	µg/L	100	9/11/2023 3:50:00 PM
n-Propylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
sec-Butylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Styrene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
tert-Butylbenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1,1,2-Tetrachloroethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1,2,2-Tetrachloroethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Tetrachloroethene (PCE)	ND	10	µg/L	100	9/11/2023 3:50:00 PM
trans-1,2-DCE	ND	10	µg/L	100	9/11/2023 3:50:00 PM
trans-1,3-Dichloropropene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2,3-Trichlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2,4-Trichlorobenzene	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1,1-Trichloroethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,1,2-Trichloroethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Trichloroethene (TCE)	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Trichlorofluoromethane	ND	10	µg/L	100	9/11/2023 3:50:00 PM
1,2,3-Trichloropropane	ND	20	µg/L	100	9/11/2023 3:50:00 PM
Vinyl chloride	ND	10	µg/L	100	9/11/2023 3:50:00 PM
Xylenes, Total	77	15	µg/L	100	9/11/2023 3:50:00 PM
Surr: Dibromofluoromethane	90.8	70-130	%Rec	100	9/11/2023 3:50:00 PM
Surr: 1,2-Dichloroethane-d4	84.1	70-130	%Rec	100	9/11/2023 3:50:00 PM
Surr: Toluene-d8	113	70-130	%Rec	100	9/11/2023 3:50:00 PM
Surr: 4-Bromofluorobenzene	107	70-130	%Rec	100	9/11/2023 3:50:00 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	6000	500	µg/L	100	9/11/2023 3:50:00 PM
Surr: BFB	87.1	70-130	%Rec	100	9/11/2023 3:50:00 PM

Matrix: AIR

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank в

Above Quantitation Range/Estimated Value Е

J Analyte detected below quantitation limits

- Р Sample pH Not In Range
- RL Reporting Limit

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### ANALYTICAL SUMMARY REPORT

September 14, 2023

Hall Environmer 4901 Hawkins S Albuquerque, NI	t NE Ste D			
Work Order: Project Name:	B23090044 G	Quote ID: B15626		
		ed the following 1 sample for Ha Collect Date Receive Date		tal on 9/1/2023 for analysis. Test
B23090044-001	2308H03-001B, Influent 8-30	: 08/30/23 16:00 09/01/23	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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:Hall EnvironmentalProject:Not IndicatedLab ID:B23090044-001Client Sample ID:2308H03-001B, Influent 8-30

 Report Date:
 09/14/23

 Collection Date:
 08/30/23 16:00

 DateReceived:
 09/01/23

 Matrix:
 Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.39	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Nitrogen	77.55	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Carbon Dioxide	0.87	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Methane	0.02	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Hexanes plus	0.17	Mol %		0.01		GPA 2261-95	09/05/23 13:21 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
Hexanes plus	0.072	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
GPM Total	0.072	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
GPM Pentanes plus	0.072	gpm		0.001		GPA 2261-95	09/05/23 13:21 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	8			1		GPA 2261-95	09/05/23 13:21 / jrj
Net BTU per cu ft @ std cond. (LHV)	8			1		GPA 2261-95	09/05/23 13:21 / jrj
Pseudo-critical Pressure, psia	549			1		GPA 2261-95	09/05/23 13:21 / jrj
Pseudo-critical Temperature, deg R	242			1		GPA 2261-95	09/05/23 13:21 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	09/05/23 13:21 / jrj
Air, % - The analysis was not corrected for air.	97.75			0.01		GPA 2261-95	09/05/23 13:21 / jrj

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 09/05/23 13:21 / jrj



1:03:58 PM Inust our People. Trust our Data. www.energylab.com Billings, MT 406.252.6325 • Casper, WY 307.435.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Report Date: 09/14/23

## **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client <sup>.</sup>	Hall Environmental	Work Order: B23090044
Chefit.		WOIR Older. D23090044

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch:	R408198
Lab ID:	LCS090523	11 Lat	ooratory Co	ntrol Sample			Run: GCNG	A-B_230905A		09/05/	23 11:08
Oxygen			0.64	Mol %	0.01	128	70	130			
Nitrogen			5.99	Mol %	0.01	100	70	130			
Carbon D	Dioxide		1.01	Mol %	0.01	102	70	130			
Methane			74.6	Mol %	0.01	100	70	130			
Ethane			6.10	Mol %	0.01	102	70	130			
Propane			4.92	Mol %	0.01	100	70	130			
Isobutane	e		2.00	Mol %	0.01	100	70	130			
n-Butane	l de la construcción de la constru		2.00	Mol %	0.01	100	70	130			
Isopentar	ne		1.00	Mol %	0.01	100	70	130			
n-Pentan	e		1.00	Mol %	0.01	100	70	130			
Hexanes	plus		0.78	Mol %	0.01	98	70	130			
Lab ID:	B23090041-001ADUP	12 Sai	mple Duplic	ate			Run: GCNG	A-B_230905A		09/05	23 12:16
Oxygen			21.7	Mol %	0.01				0	20	
Nitrogen			78.1	Mol %	0.01				0	20	
Carbon D	Dioxide		0.26	Mol %	0.01				0.0	20	
Hydroger	n 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	e		<0.01	Mol %	0.01					20	
n-Butane			<0.01	Mol %	0.01					20	
Isopentar	ne		<0.01	Mol %	0.01					20	
n-Pentan	e		<0.01	Mol %	0.01					20	
	plus		<0.01	Mol %	0.01					20	

ENERGY LABORATORIES

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# Work Order Receipt Checklist

## Hall Environmental

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Login completed by:	Richard L. Shular		Date R	leceived: 9/1/2023
Reviewed by:	darcy		Rece	eived by: car
Reviewed Date:	9/9/2023		Carri	er name: FedEx
Shipping container/cooler in	good condition?	Yes 🔽	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present 🗹
Chain of custody present?		Yes 🗹	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	n 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 h (Exclude analyses that are co such as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all sl	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank tempe	erature:	20.6°C No Ice		
Containers requiring zero hea bubble that is <6mm (1/4").	adspace have no headspace or	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 CUST	CHAIN OF CUSTODY RECORD MGE	ас I Ос I	Hall I Wet	Hall Environmental Analysis Laboratory 4901 Havkins NE Albuquerque, NM 87109 7EL: 505-345-4107 FAN: 505-345-4107 Website: www.hallenvironmental.com
SUB CONTRATOR Energy Labs -Billings COMPANY. ADDRESS 1120 South 27th Street CUTY. STATE. ZIP Billings, MT 59107	Energy Laboratorics	S PHONE ACCOUNT #	(406) 869-6253	FAN: EMAIL	(406) 252-6069
ITEM SAMPLE CLIENT SAMPLE ID 1 2308H03-001B Influent 8-30	BOTTLE TYPE TEDLAR	COLLECTION MATRIX DATE Air 8/30/2023 4:00:00 PM	COLLECTION DATE Saare ANALA 8/30/2023 4:00:00 PM 1 Natural Gas Analysis- 02+C02	ANALYTICAL is- 02+C02	ANALYTICAL COMMENTS 5- 02+C02 S23096044

AMPLE ID on all final reports. Please e-mail results to lab@hallenvironment       Time     Received By     Date     Time       RUSH     Next BD     2nd BD     3nd BD	Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.	Time     REPORT TRANSMITTAL DESIRED:       Time     HARDCOPY (extra cost)     EAAL     ONLINE       Ime     FOR LAB USE ONLY     FOR LAB USE ONLY     Stant to Cool <sup>3</sup> 3rd BD     Comments     Comments     Comments
8/31/2023	ECIAL INSTRUCTIONS / COMMENTS: Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Pleas	Time 7:52 AM Received Time Received Time Received
	SPECIAL INSTRUCTIONS / COMMENTS: Please include the LAB ID and the	Relinquished By Relinquished By TAT:

### Received by OCD: 1/15/2024 4:03:58 PM

Page 8 of 10 Page 5 of 5

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Released to Imaging: 4/9/2024 10:05:11 AM

HALL ENVIRONMENT ANALYSIS LABORATORY	FAL	Hall Environmenta Alı TEL: 505-345-397 Website: wycyr.h	49 buquei 5 FAX	01 Haw que, NX : 505-3-	kins NE 187109 <b>S</b> 15-4107	ample Log-I	n Check List
Client Name: HILCORP	ENERGY	Work Order Numbe	r: 230	08H03		Rc	ptNo: 1
Completed By: Tracy Ca		8/31/2023 6:10:00 AN 8/31/2023 7:49:05 AN 3					
Chain of Custody							
1. Is Chain of Custody com	plete?		Yes	;	No	Not Present	
2. How was the sample deli	vered?		<u>Co</u>	<u>irier</u>			
Log In							
3. Was an attempt made to	cool the samples?		Yes		No [	NA	
4. Were all samples received	d at a temperature of	>0° C to 6.0°C	Yes		No [	NA	
5. Sample(s) in proper conta	ainer(s)?		Yes		No [		
6. Sufficient sample volume	for indicated test(s)?		Yes		No	7	
7. Are samples (except VOA		reserved?	Yes				
8. Was preservative added to			Yes		No 💽		
9. Received at least 1 vial wi	th headsnace <1///" f		Yes	Ē	No	٦ (	
10. Were any sample contain			Yes		No S		<u>v</u>
11. Does paperwork match bo (Note discrepancies on ch	ttle labels?		Yes	_	No [	# of preserved bottles checked for pH:	<2.91 >12 unless noted)
12. Are matrices correctly ider		stody?	Yes	$\checkmark$	No [		
13. Is it clear what analyses w			Yes		No 🗌	- /	<i></i>
14. Were all holding times able (If no, notify customer for a			Yes		No 🗌	] Ahecked b	y: (mc 8/31/k3
Special Handling (if app	olicable)						
15. Was client notified of all d		order?	Yes		No [		
Person Notified:		Date:					
By Whom:		Via:	eMa	ail 🗔	Phone 🏹 F	ax 🗌 In Person	
Regarding:			CT IN MUSIC	ater scheme in and			-
Client Instructions:	Mailing address and	phone number are mis	ssing	on COC	- TMC 8/31/2	23	-
16. Additional remarks:							
17. <u>Cooler Information</u> Cooler No Temp °C 1 N/A	Condition Seal Good Yes	Intact Seal No S	eal Da	ate	Signed By		

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บ่	nain	-of-C	Chain-of-Custody Record	Turn-Around Time:	lime:				_								
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email or Fax#:	ax#:	MKillo.	MKillough & hillary com	Project Manager:	er:		-	(c			<sup>⊅</sup> C			()			
QA/QC Package:	ckage: ird		Level 4 (Full Validation)	Stuart	are hyde	, U				SWIS	0S '7Oc	_	4 4 1	heedA	1ep		
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🗆 EDD (Type)	Type)			olers:	-			_							520		_
				Cooler Temp(including cF):	duding CF): N	1/1 (°C)				_		_	100		<u>.</u>		
Date	Time	Matrix	Sample Name	Container F Type and # T	Preservative Tvpe	HEAL No.	\X∃TE	98:H9	M) 803	d sHA	8 CRA 8	V) 092	S) 072	otal Co	PIX64		
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Released to	Imagin	ameles sub ng: 4/9/2	H 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.	ontracted to other acore	adited laboratories	s. This serves as notice of thi	s possibilit	/. Any s	ub-contra	acted da	a will be	clearly	notated	on the a	inalytical re	port.	] .



October 25, 2023

Stuart Hyde Hilcorp Energy PO Box 61529 Houston, TX 77208-1529 TEL: (337) 276-7676 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Sunray B1B

OrderNo.: 2309H67

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/30/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** Lab Order 2309H67

Hall Environmental Analysi	s Laboratory, l	[ <b>nc.</b>			Lab Order 2309H67 Date Reported: 10/25/20	)23				
CLIENT: Hilcorp Energy Project: Sunray B1B Lab ID: 2309H67-001	Client Sample ID: Sunray Influent 9-29-23Collection Date: 9/29/2023 11:20:00 AMMatrix: AIRReceived Date: 9/30/2023 8:10:00 AM									
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: GASOLINE RAM	NGE				Analyst	JJP				
Gasoline Range Organics (GRO)	4100	250	µg/L	50	10/11/2023 3:39:46 PM	GA1003				
Surr: BFB	181	15-412	%Rec	50	10/11/2023 3:39:46 PM	GA1003				
EPA METHOD 8260B: VOLATILES					Analyst	JR				
Benzene	4.8	2.5	µg/L	50	10/10/2023 10:55:16 AN					
Toluene	140	5.0	μg/L	50	10/10/2023 10:55:16 AN					
Ethylbenzene	11	5.0	μg/L	50	10/10/2023 10:55:16 AM					
Methyl tert-butyl ether (MTBE)	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM					
1,2,4-Trimethylbenzene	6.6	5.0	µg/L	50	10/10/2023 10:55:16 AN					
1,3,5-Trimethylbenzene	6.2	5.0	µg/L	50	10/10/2023 10:55:16 AN					
1,2-Dichloroethane (EDC)	ND	2.5	μg/L	50	10/10/2023 10:55:16 AM	R10036				
1,2-Dibromoethane (EDB)	ND	5.0	μg/L	50	10/10/2023 10:55:16 AM	R10036				
Naphthalene	ND	10	μg/L	50	10/10/2023 10:55:16 AN	R10036				
1-Methylnaphthalene	ND	20	μg/L	50	10/10/2023 10:55:16 AN	R10036				
2-Methylnaphthalene	ND	20	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Acetone	ND	50	μg/L	50	10/10/2023 10:55:16 AM	R10036				
Bromobenzene	ND	5.0	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Bromodichloromethane	ND	5.0	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Bromoform	ND	5.0	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Bromomethane	ND	10	μg/L	50	10/10/2023 10:55:16 AM	R10036				
2-Butanone	ND	50	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Carbon disulfide	ND	50	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Carbon tetrachloride	ND	5.0	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Chlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				
Chloroethane	ND	10	μg/L	50	10/10/2023 10:55:16 AN	R10036				
Chloroform	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
Chloromethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
2-Chlorotoluene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				
4-Chlorotoluene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
cis-1,2-DCE	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
cis-1,3-Dichloropropene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
1,2-Dibromo-3-chloropropane	ND	10	µg/L	50	10/10/2023 10:55:16 AM	R10036				
Dibromochloromethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				
Dibromomethane	ND	10	µg/L	50	10/10/2023 10:55:16 AN	R10036				
1,2-Dichlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
1,3-Dichlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				
1,4-Dichlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				
Dichlorodifluoromethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
1,1-Dichloroethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 AN	R10036				
1,1-Dichloroethene	ND	5.0	µg/L	50	10/10/2023 10:55:16 AM	R10036				

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

Н Holding times for preparation or analysis exceeded

В Analyte detected in the associated Method Blank Е Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

RL Reporting Limit

Р Sample pH Not In Range

Not Detected at the Reporting Limit PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Page 1 of 5

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ND

**Analytical Report** Lab Order 2309H67

Hall Environmental Analysi	s Laboratory, In	nc.			Lab Order 2309H67 Date Reported: 10/25/2	2023
CLIENT: Hilcorp Energy Project: Sunray B1B	Mateline AID	Co	llection Dat	<b>e:</b> 9/2	nray Influent 9-29-23 9/2023 11:20:00 AM	
Lab ID: 2309H67-001	Matrix: AIR	K	eceived Dat	<b>e:</b> 9/3	0/2023 8:10:00 AM	
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	t: JR
1,2-Dichloropropane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,3-Dichloropropane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
2,2-Dichloropropane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,1-Dichloropropene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
Hexachlorobutadiene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
2-Hexanone	ND	50	µg/L	50	10/10/2023 10:55:16 A	M R100362
Isopropylbenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
4-Isopropyltoluene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
4-Methyl-2-pentanone	ND	50	µg/L	50	10/10/2023 10:55:16 A	M R100362
Methylene chloride	ND	15	µg/L	50	10/10/2023 10:55:16 A	M R100362
n-Butylbenzene	ND	15	µg/L	50	10/10/2023 10:55:16 A	M R100362
n-Propylbenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
sec-Butylbenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
Styrene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
tert-Butylbenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
Tetrachloroethene (PCE)	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
trans-1,2-DCE	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
trans-1,3-Dichloropropene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,2,3-Trichlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,2,4-Trichlorobenzene	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,1,1-Trichloroethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
1,1,2-Trichloroethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	M R100362
Trichloroethene (TCE)	ND	5.0	μg/L	50	10/10/2023 10:55:16 A	M R100362
Trichlorofluoromethane	ND	5.0	µg/L	50	10/10/2023 10:55:16 A	
1,2,3-Trichloropropane	ND	10	µg/L	50	10/10/2023 10:55:16 A	M R100362
Vinyl chloride	ND	5.0	μg/L	50	10/10/2023 10:55:16 A	M R100362
Xylenes, Total	100	7.5	µg/L	50	10/10/2023 10:55:16 A	M R100362
Surr: Dibromofluoromethane	96.5	70-130	%Rec	50	10/10/2023 10:55:16 A	M R100362
Surr: 1,2-Dichloroethane-d4	95.4	70-130	%Rec	50	10/10/2023 10:55:16 A	M R100362
Surr: Toluene-d8	99.2	70-130	%Rec	50	10/10/2023 10:55:16 A	M R100362
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	50	10/10/2023 10:55:16 A	M R100362

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

\* 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.
- В Analyte detected in the associated Method Blank
- Е Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL Reporting Limit

Page 2 of 5

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**Qualifiers:** 



### ANALYTICAL SUMMARY REPORT

October 05, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D						
Work Order: Project Name:							
Energy Laborato	ories Inc Billings MT receive Client Sample ID	ed the following 1 sample for Hal Collect Date Receive Date	l Environmen Matrix	tal on 10/4/2023 for analysis.			
B23100339-001			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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Hall Environmental
Project:	Not Indicated
Lab ID:	B23100339-001
Client Sample ID:	2309H67-001B, Sunray Influent 9-29-23

Report Date: 10/05/23 Collection Date: 09/29/23 11:20 DateReceived: 10/04/23 Matrix: Air

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.67	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Nitrogen	77.87	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Carbon Dioxide	0.36	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Hexanes plus	0.10	Mol %		0.01		GPA 2261-95	10/05/23 10:19 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
Hexanes plus	0.042	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
GPM Total	0.042	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
GPM Pentanes plus	0.042	gpm		0.001		GPA 2261-95	10/05/23 10:19 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	5			1		GPA 2261-95	10/05/23 10:19 / jrj
Net BTU per cu ft @ std cond. (LHV)	4			1		GPA 2261-95	10/05/23 10:19 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	10/05/23 10:19 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	10/05/23 10:19 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	10/05/23 10:19 / jrj
Air, % - The analysis was not corrected for air.	99.00			0.01		GPA 2261-95	10/05/23 10:19 / jrj

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
 To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

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

10/05/23 10:19 / jrj



www.energylab.com

Billings, MT 406.252.6325 • Casper, WY 307.235.051.59f 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Report Date: 10/05/23

## **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client:	Hall Environmental	Work Order:	B23100339
•			BECICOUCO

RL %REC Low Limit High Limit Analyte Count Result Units **RPD RPDLimit** Qual GPA 2261-95 Batch: R410004 Method: Lab ID: B23100339-001ADUP 12 Sample Duplicate Run: GCNGA-B 231005A 10/05/23 10:49 21.7 Mol % 0.01 0.0 20 Oxygen Nitrogen 77.9 Mol % 0.01 0.0 20 Carbon Dioxide 0.36 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 0.01 20 Propane < 0.01 Mol % Isobutane < 0.01 Mol % 0.01 20 <0.01 Mol % 0.01 20 n-Butane 0.01 20 Isopentane < 0.01 Mol % 0.01 20 n-Pentane < 0.01 Mol % 0.0 Hexanes plus 0.10 Mol % 0.01 20 Lab ID: LCS100523 11 Laboratory Control Sample Run: GCNGA-B\_231005A 10/05/23 11:18 0.61 0.01 70 Oxygen Mol % 122 130 70 Nitrogen 6.06 Mol % 0.01 101 130 Carbon Dioxide 1.01 Mol % 0.01 102 70 130 70 Methane 74.6 Mol % 0.01 100 130 Ethane 6.05 0.01 101 70 130 Mol % Propane 4.88 Mol % 0.01 99 70 130 2.00 70 Isobutane Mol % 0.01 100 130 n-Butane 2.00 Mol % 0.01 100 70 130 Mol % 0.01 102 70 Isopentane 1.02 130 n-Pentane 1.01 Mol % 0.01 101 70 130 70 Hexanes plus 0.81 0.01 101 130 Mol %



Trust our People. Trust our Data. www.energylab.com Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# Work Order Receipt Checklist

## Hall Environmental

Login completed by: Addison A. Gilbert		Date Received: 10/4/2023					
Reviewed by:		Received by: aag					
Reviewed Date:		Carr	ier name: Return-FedEx Ground				
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 CI, Sulfite, Ferrous Iron, etc.)	Yes 🖌	No 🗌					
Temp Blank received in all shipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable				
Container/Temp Blank temperature:	17.4°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.

#### **Contact and Corrective Action Comments:**

None

SUB CONTRATOR. Energy Labs -Billings       COMPANY.       Energy Lab.         ADDRESS       1120 South 27th Street       Energy Lat.         CITY, STATE, 2IP.       Billings, MT 59107       Billings, MT 59107         FIEM       S.AMPLE       CLIENT SAMPLE ID       B         ITEM       S.AMPLE       TED       TED         ITEM       S.AMPLE       CLIENT SAMPLE ID       TED         ITEM       S.AMPLE       TED       TED         ITEM       S.AMPLE       TED       TED         ITEM       S.AMPLE       TED       TED         ITEM       S.AMPLE       TED       TED         ITEM       S.AMPLE       DOI:       TED       TED         Item       ADDIent 9-29-23       TED       TED       TED         Item       2309H67-001B       Sunray Influent 9-29-23       TED       TED				4901 Havkins NE Albuquerque, NAI 87109 TEL: 505-345-3975 FAY: 505-345-4107 H'ebsite: www.hallenvironmental.com
1120 South 27th Street       Billings, MT 59107       MPLE     CLIEN'T SAMPLE ID       67-001B     Sunray Influent 9-29-23       67-001B     Sunray Influent 9-29-23       curray Influent 9-29-23       ethe LAB ID and the CLIEN'T SAMPLE ID on all final reported by:       Date:     Immediate Intervent Interven	gy Laboratories	PHONE	3XV4 8267-698 (90F)	0309-252-0000
Billings, MT 59107       MPLE     CLJEN'T SAMPLE ID       67-001B     Sunray Influent 9-29-23       67-001B     Sunray Influent 9-29-23       ctrice     Comparison       interface     Comparison       interface     Interface       interface     Interface       Date:     Interface       Date:     Interface		ACCOUNT#:	EMAIL	
MPLE     CLLEN'T SAMPLE ID       67-001B     Sunray Influent 9-29-23       67-001B     Sunray Influent 9-29-23       ctrice     Cluent 9-29-23   Intermediate the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID on all final reported the Lab ID and the CLLEN'T SAMPLE ID ID and the CLLEN				
67-001B Sunray Influent 9-29-23 Lettors in the class of	BOTTLE TYPE MATRIX	COLLECTION COLLECTION DATE		ANALYTICAL COMMENTS
ECIAL INSTRUCTIONS / COMMENTS: Please include the LAB ID and the CLJENT SAMPLE ID on all final report finquished By: tinquished By: tinde the LAB ID and the CLJENT SAMPLE ID on all final report tinquished By: tint Mathematical States and States an	TEDLAR Air 9/20	9/29/2023 11:20:00 AM 1	1 Natural Gas Analysis- 02+C02	6250912221
PECIAL INSTRUCTIONS / COMMENTS: Please include the LAB ID and the CLJENT SAMPLE ID on all final report dinquished By: time: Date: Time: Received By:				22 Mers
PECIAL INSTRUCTIONS/COMMENTS: Please include the LAB ID and the CLJENT SAMPLE ID on all final report. imquished By. Inc. 117 PM Received By. Inc. Time: Received By.				
Please include the L.A.B ID and the CLJENT SAMPLE ID on all final report dinquished By: LAB ID and the CLJENT SAMPLE ID on all final report inquished By: LAB ID and the CLJENT SAMPLE ID on all final report inquished By: LAB ID and the CLJENT SAMPLE ID on all final report inquished By: LAB ID and the CLJENT SAMPLE ID on all final report				
Date: 10/2/2023 Time: 1:17 PM Date: Time:	ports. Please e-mail results to lab@	dhallenvironmental.con	case e-mail results to $lab(\widehat{a})$ haltonvironmental.com. Please return all coolers and blue ice. Thank you.	ank you.
Date: Time:	Date:	Time:	REPORT TRAI	ITTAL DESIRED:
	Date:	time:	HARDCOPY (extra cost)	EAX EMAIL ONLINE
Relinquished By: Date: Time: Beesivering:	A.A. Dall years	27 Time 20	T	

### Received by OCD: 1/15/2024 4:03:58 PM

### Page 93 of 180

Comments.

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QC SUMMARY REPORT	WO#:	2309H67
Hall Environmental Analysis Laboratory, Inc.		25-Oct-23

Client:	Hilcorp I	Energy									
Project:	Sunray E	B1B									
Sample ID:	2309h67-001adup	SampT	Type: DU	Р	Tes	tCode: EF	A Method	8015D: Gasol	ine Range	•	
Client ID:	Sunray Influent 9	-29- Batcl	h ID: GA	100376	F	RunNo: <b>10</b>	00376				
Prep Date:		Analysis [	Date: 10	/11/2023	S	SeqNo: <b>36</b>	677482	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	e Organics (GRO)	4200	250						1.84	20	
Surr: BFB		190000		100000		185	15	412	0	0	

#### 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

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Hilcorp Energy **Client: Project:** 

HICOLD FILE
Sunray B1B

Sample ID: 2309h67-001adup SampType: DUP			TestCode: EPA Method 8260B: Volatiles							
Client ID: Sunray Influent 9-29- Batch ID: R100362			RunNo: 100362							
Prep Date:	Analysis D				SeqNo: 3		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.9	2.5						1.91	20	
Toluene	130	5.0						4.78	20	
Ethylbenzene	9.6	5.0						11.5	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	5.3	5.0						21.8	20	R
1,3,5-Trimethylbenzene	5.3	5.0						15.7	20	
1,2-Dichloroethane (EDC)	ND	2.5						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	
2,2 51611010010000		0.0						0	20	

**Qualifiers:** 

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank В

Е Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

Reporting Limit RL

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WO#:	2309H67
	25.0 ( 22

25-Oct-23

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Hilcorp Energy Project: Sunray B1B

Sample ID: 2309h67-001adup	SampT	ype: DUP	Tes	stCode: EPA	A Method	8260B: Volati	es		
Client ID: Sunray Influent 9-	-29- Batch	ID: <b>R100362</b>	F	RunNo: <b>100</b>	)362				
Prep Date:	Analysis D	ate: 10/10/2023	:	SeqNo: 367	5829	Units: µg/L			
Analyte	Result	PQL SPK va	lue SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0					0	20	
Hexachlorobutadiene	ND	5.0					0	20	
2-Hexanone	ND	50					0	20	
Isopropylbenzene	ND	5.0					0	20	
4-Isopropyltoluene	ND	5.0					0	20	
4-Methyl-2-pentanone	ND	50					0	20	
Methylene chloride	ND	15					0	20	
n-Butylbenzene	ND	15					0	20	
n-Propylbenzene	ND	5.0					0	20	
sec-Butylbenzene	ND	5.0					0	20	
Styrene	ND	5.0					0	20	
tert-Butylbenzene	ND	5.0					0	20	
1,1,1,2-Tetrachloroethane	ND	5.0					0	20	
1,1,2,2-Tetrachloroethane	ND	5.0					0	20	
Tetrachloroethene (PCE)	ND	5.0					0	20	
trans-1,2-DCE	ND	5.0					0	20	
trans-1,3-Dichloropropene	ND	5.0					0	20	
1,2,3-Trichlorobenzene	ND	5.0					0	20	
1,2,4-Trichlorobenzene	ND	5.0					0	20	
1,1,1-Trichloroethane	ND	5.0					0	20	
1,1,2-Trichloroethane	ND	5.0					0	20	
Trichloroethene (TCE)	ND	5.0					0	20	
Trichlorofluoromethane	ND	5.0					0	20	
1,2,3-Trichloropropane	ND	10					0	20	
Vinyl chloride	ND	5.0					0	20	
Xylenes, Total	92	7.5					8.37	20	
Surr: Dibromofluoromethane	47	50	.00	94.2	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	48	50	.00	95.3	70	130	0	0	
Surr: Toluene-d8	50	50	.00	99.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	53	50	00	107	70	130	0	0	

#### 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

WO#: 2309H67 25-Oct-23

Released to Imaging: 4/9/2024 10:05:11 AM

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3975	4901 Hawkins NE Iquerque, NM 87109	Sam	ple Log-In Check List
Client Name: Hilcorp Energy	Work Order Number:	2309H67		RcptNo: 1
Received By: Tracy Casarrubias	9/30/2023 8:10:00 AM			
Completed By: Tracy Casarrubias	9/30/2023 9:47:56 AM			
Reviewed By: JI210/2/23	9/30/2023 9.41.30 AM			
Chain of Custody				
1. Is Chain of Custody complete?		Yes	No 🗹	Not Present
2. How was the sample delivered?		Courier		NN NNONNA 10
Log In				NN TOWN
3. Was an attempt made to cool the samples?		Yes 📙	No 🖄	W NA 12
4. Were all samples received at a temperature of	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 🗌	
10. Were any sample containers received broker	1?	Yes	No 🗹	
11. Does paperwork match bottle labels?		Yes 🗹	No 🗌	# of preserved bottles checked for pH: (<2 or >12 unless noted)
(Note discrepancies on chain of custody)			No 🗌	Adjusted?
12. Are matrices correctly identified on Chain of C 13. Is it clear what analyses were requested?	Justody?	Yes 🗹		
14. Were all holding times able to be met?		Yes 🗹		Checked by: TTMC 9/30/23
(If no, notify customer for authorization.)		163	/	
Special Handling (if applicable)				
15. Was client notified of all discrepancies with t	his order?	Yes	No 🗌	NA 🗹
Person Notified:	Date:			
By Whom:	Via:	eMail [ Phor	ne 🗌 Fax	In Person
Regarding:	na territor de childre contrata a		CALORIN LABOR VILLA	
Client Instructions: Mailing address a	nd phone number are mi	issing on COC- TN	IC 9/30/23	
16. Additional remarks:				
17. <u>Cooler Information</u> Cooler No Temp °C Condition Se 1 N/A Good Yes		Geal Date Sig	gned By	4

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	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis	*OS	5 (4) 2014 2014 2014 2017 2017 2017 2017 2017 2017 2017 2017	4.1) r 0R2 r 827( r 827( r 827( r 1) r 1)	O 3' 12' 12' 12' 12' 12' 12' 12' 12' 12' 12	TBF Jocc Jocc Jocc Jocc Jocc Jocc Jocc Joc	5     5       5     5       6     6       7     8       8     8       9     7       9     7       9     8       14     9       15     8       14     9       15     8       14     9       15     8       16     16       17     9       18     10       19     10       10     10       10     10       10     10	Тоt 8826 808 827 808 827 827 828 828 828 828 828 828 828 82							Time Remarks:	1427 CC: Shyde @ engolum. com		1/29/23 13 1 Muster Wooler 120/20 3:00
Turn-Around Time:	🗹 Standard 🛛 Rush	Project Name:	SUMMAY BIB	Project #:		Project Manager:	S. Hyde - Ensolum	E. Carroll	On Ice: 🛛 Yes 🕅 No	-	Cooler Temp(Including CF): NA	#							Received by: / Via: Date T	100 1/29/23	Received by: Via: Court r Daté T	9/30/23
Chain-of-Custody Record	Client: Hilcore		Mailing Address:		Phone #:	email or Fax#: <u>mkill@dum@ hilcor0.com</u>	QA/QC Package:	□ Az Compliance	Other	EDD (Type)		Date Time Matrix Sample Name	11:20 Aiv						Date: Time: Relinquished by:	1-29 1424 PC-1	Relimdui	Means 113 1 Whater Would

Page 98 of 180



November 02, 2023

Stuart Hyde HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Sunray B 1B

OrderNo.: 2310673

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/13/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B 1B

Project:

**Analytical Report** Lab Order 2310673

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/2/2023 Client Sample ID: Influent 10-6-23 Collection Date: 10/6/2023 1:15:00 PM

Project:	Sullray D 1D		Cone	ection Date:	10/0/2	023 1:13:00 PM
Lab ID:	2310673-001	Matrix: AIR	Rec	eived Date:	10/13/	2023 6:30:00 AM
Analyses		Result	RL Q	ual Units	DF	Date Analyzed
EPA MET	THOD 8015D: GASOLINE RANG	Έ				Analyst: JJP
Gasoline	Range Organics (GRO)	1400	250	µg/L	50	10/19/2023 3:04:48 PM
Surr: E		118	15-412	%Rec	50	10/19/2023 3:04:48 PM
	THOD 8260B: VOLATILES					Analyst: <b>JR</b>
Benzene		ND	2.0	µg/L	50	10/19/2023 10:15:36 AM
Toluene		48	5.0	µg/L	50	10/19/2023 10:15:36 AM
Ethylben	zene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Methyl te	ert-butyl ether (MTBE)	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,2,4-Tri	methylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,3,5-Trii	methylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,2-Dichl	loroethane (EDC)	ND	2.0	µg/L	50	10/19/2023 10:15:36 AM
1,2-Dibro	omoethane (EDB)	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Naphthal	lene	ND	10	µg/L	50	10/19/2023 10:15:36 AM
1-Methyl	naphthalene	ND	20	µg/L	50	10/19/2023 10:15:36 AM
2-Methyl	naphthalene	ND	20	µg/L	50	10/19/2023 10:15:36 AM
Acetone		ND	50	μg/L	50	10/19/2023 10:15:36 AM
Bromobe	enzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Bromodic	chloromethane	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
Bromofor	rm	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Bromome	ethane	ND	10	µg/L	50	10/19/2023 10:15:36 AM
2-Butano	one	ND	50	µg/L	50	10/19/2023 10:15:36 AM
Carbon d	disulfide	ND	50	µg/L	50	10/19/2023 10:15:36 AM
Carbon to	etrachloride	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Chlorobe	enzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Chloroeth	hane	ND	10	µg/L	50	10/19/2023 10:15:36 AM
Chlorofor	rm	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
Chlorome	ethane	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
2-Chlorot	toluene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
4-Chlorot	toluene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
cis-1,2-D	DCE	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
cis-1,3-D	Dichloropropene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
	omo-3-chloropropane	ND	10	μg/L	50	10/19/2023 10:15:36 AM
Dibromor	chloromethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Dibromor	methane	ND	10	µg/L	50	10/19/2023 10:15:36 AM
1,2-Dichl	lorobenzene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
1,3-Dichl	lorobenzene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
1,4-Dichl	lorobenzene	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
Dichlorod	difluoromethane	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
1,1-Dichl	loroethane	ND	5.0	μg/L	50	10/19/2023 10:15:36 AM
	loroethene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank в

Above Quantitation Range/Estimated Value Е

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit Page 1 of 5

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**CLIENT: HILCORP ENERGY** 

Sunray B 1B

**Project:** 

Analytical Report Lab Order 2310673

Date Reported: 11/2/2023

### Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: Influent 10-6-23 Collection Date: 10/6/2023 1:15:00 PM Received Date: 10/13/2023 6:30:00 AM

Lab ID: 2310673-001	Matrix: AIR	Rece	ived Date	: 10/13/	/2023 6:30:00 AM
Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: <b>JR</b>
1,2-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,3-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
2,2-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,1-Dichloropropene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Hexachlorobutadiene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
2-Hexanone	ND	50	µg/L	50	10/19/2023 10:15:36 AM
Isopropylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
4-Isopropyltoluene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
4-Methyl-2-pentanone	ND	50	µg/L	50	10/19/2023 10:15:36 AM
Methylene chloride	ND	15	µg/L	50	10/19/2023 10:15:36 AM
n-Butylbenzene	ND	15	µg/L	50	10/19/2023 10:15:36 AM
n-Propylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
sec-Butylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Styrene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
tert-Butylbenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Tetrachloroethene (PCE)	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
trans-1,2-DCE	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
trans-1,3-Dichloropropene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,2,3-Trichlorobenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,1,1-Trichloroethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,1,2-Trichloroethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Trichloroethene (TCE)	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Trichlorofluoromethane	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
1,2,3-Trichloropropane	ND	10	µg/L	50	10/19/2023 10:15:36 AM
Vinyl chloride	ND	5.0	µg/L	50	10/19/2023 10:15:36 AM
Xylenes, Total	41	7.5	µg/L	50	10/19/2023 10:15:36 AM
Surr: Dibromofluoromethane	99.3	70-130	%Rec	50	10/19/2023 10:15:36 AM
Surr: 1,2-Dichloroethane-d4	91.3	70-130	%Rec	50	10/19/2023 10:15:36 AM
Surr: Toluene-d8	97.0	70-130	%Rec	50	10/19/2023 10:15:36 AM
Surr: 4-Bromofluorobenzene	99.7	70-130	%Rec	50	10/19/2023 10:15:36 AM

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. 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

RL Re

Page 2 of 5

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### ANALYTICAL SUMMARY REPORT

November 01, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D			
Work Order:		Quote ID: B15626		
Project Name:	Not Indicated			
Energy Laborate	ories Inc Billings MT receive	ed the following 1 sample for H	all Environmen	tal on 10/17/2023 for analysis.
Lab ID	Client Sample ID	Collect Date Receive Dat	e Matrix	Test
B23101318-001	2310673-001B, Influent 10-6-23	: 10/06/23 13:15 10/17/23	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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:Hall EnvironmentalProject:Not IndicatedLab ID:B23101318-001Client Sample ID:2310673-001B, Influent 10-6-23

Report Date: 11/01/23 Collection Date: 10/06/23 13:15 DateReceived: 10/17/23 Matrix: Air

Analyses	Result U	Jnits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.74 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Nitrogen	78.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Carbon Dioxide	0.18 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Hydrogen Sulfide	<0.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Methane	<0.01 M	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Ethane	<0.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Propane	<0.01 M	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Isobutane	<0.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
n-Butane	<0.01 M	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Isopentane	<0.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
n-Pentane	<0.01 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Hexanes plus	0.07 N	/lol %		0.01		GPA 2261-95	10/19/23 12:24 / jrj
Propane	< 0.001 g	Ipm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
Isobutane	< 0.001 g	jpm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
n-Butane	< 0.001 g	Ipm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
Isopentane	< 0.001 g	Ipm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
n-Pentane	< 0.001 g	jpm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
Hexanes plus	0.029 g	Ipm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
GPM Total	0.029 g	jpm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
GPM Pentanes plus	0.029 g	Ipm		0.001		GPA 2261-95	10/19/23 12:24 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	3			1		GPA 2261-95	10/19/23 12:24 / jrj
Net BTU per cu ft @ std cond. (LHV)	3			1		GPA 2261-95	10/19/23 12:24 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	10/19/23 12:24 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	10/19/23 12:24 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	10/19/23 12:24 / jrj
Air, % - The analysis was not corrected for air.	99.34			0.01		GPA 2261-95	10/19/23 12:24 / jrj

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 10/19/23 12:24 / jrj



Billings, MT 406.252.6325 • Casper, WY 307925.0515 f 180

## **QA/QC Summary Report**

Prepared by Billings, MT Branch

Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

Client: Hall Env	ironmental				Work Order:	B2310	1318	Repo	rt Date:	11/01/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 22	261-95									Batch:	R410813
Lab ID: B231010	79-004ADUP	12 Sar	mple Duplica	ate			Run: GCNG	A-B_231019A		10/19	/23 14:38
Oxygen			0.83	Mol %	0.01				1.2	20	
Nitrogen			14.4	Mol %	0.01				0.4	20	
Carbon Dioxide			0.03	Mol %	0.01				0.0	20	
Hydrogen Sulfide			<0.01	Mol %	0.01					20	
Methane			83.6	Mol %	0.01				0.1	20	
Ethane			0.75	Mol %	0.01				0.0	20	
Propane			0.21	Mol %	0.01				0.0	20	
Isobutane			0.09	Mol %	0.01				12	20	
n-Butane			0.03	Mol %	0.01				0.0	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: LCS101	923	11 Lab	oratory Cor	ntrol Sample	e		Run: GCNG	A-B_231019A		10/19/	/23 15:12
Oxygen			0.60	Mol %	0.01	120	70	130			
Nitrogen			6.00	Mol %	0.01	100	70	130			
Carbon Dioxide			0.99	Mol %	0.01	100	70	130			
Methane			74.1	Mol %	0.01	99	70	130			
Ethane			5.98	Mol %	0.01	100	70	130			
Propane			5.56	Mol %	0.01	113	70	130			
Isobutane			1.98	Mol %	0.01	99	70	130			
n-Butane			1.99	Mol %	0.01	99	70	130			
Isopentane			1.03	Mol %	0.01	103	70	130			

0.01

0.01

1.02

0.76

Mol %

Mol %

102

95

70

70

130

130

n-Pentane

Hexanes plus

ENERG

ABORATORIES

www.energylab.com

Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

B23101318

# Work Order Receipt Checklist

## Hall Environmental

Login completed by:	Yvonna E. Smith		Date	e Received: 10/17/2023	
Reviewed by:	lleprowse		R	eceived by: dnh	
Reviewed Date:	10/21/2023		Ca	arrier name: FedEx	
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present 🗹	
Chain of custody present?		Yes 🗹	No 🗌		
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗹	No 🗌		
Samples in proper container	r/bottle?	Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗹	No 🗌		
Sufficient sample volume fo	r indicated test?	Yes 🗹	No 🗌		
All samples received within (Exclude analyses that are c such as pH, DO, Res Cl, St	considered field parameters	Yes 🗸	No 🗌		
Temp Blank received in all s	shipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	erature:	15.2°C No Ice			
Containers requiring zero he bubble that is <6mm (1/4").	eadspace have no headspace or	Yes	No 🗌	No VOA vials submitted	
Water - pH acceptable upor	n 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

Billings, MT 50107       BUTTLE       BOTTLE       BOTTLE       MATRIX       ANALYTICAL COMMENTS         1       210673-0018       Inferent 10-6-23       TYPE       Ant 10 600003 11500 PM       I Natural Gas Analysis- CO2+02       \$C231 D131 3	Billings, MT 59107 SAMPLE DENT SAMPLE ID BOTTLE ROTTLE MATKIX CLLECTION ANALYTICA ANALYTICA SAMPLE CLENT SAMPLE ID TYPE MATKIX DATE ANALUTICA ANALLYTICA 2310673-001B Influent 10-6-23 TEDLAR Ar 10/6/2023 1:15:00 PM 1 Natural Gas Analysis- CO2+O2 TEDLAR Ar 10/6/2023 1:15:00 PM 1 Natural Gas Analysis- CO2+O2 cleated the LAB ID and the CLENT SAMPLE ID on all final reports. Please e-mail results to lab/@hallenvironmental.com. Please return all coolers and blue ice.	Billings, MT 59107 AMPLE CLIENT SAMPLE ID 0673-001B Influent 10-6-23 BOTTLE MATRIX DATE 0673-001B Influent 10-6-23 TTPLA ATRIX OLI LECTION ANALYTICA TEDAR AT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 11500 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 1100 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 1100 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 1100 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 1100 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 1100 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas Analysis- CO3+O2 TEDAR AIT 100/2023 110 PM 1 Natural Gas AIT 100/2023 110 PM 1 Natural Gas AIT 100/2023 110 PM 1 Natural Gas AIT 100	Billings, MT 59107     Billings, MT 59107       AMPLE     CLENT SAMPLE ID     TYPE     MATRIX     DATE     ANALYTICA       6673-001B     Influent 10-6-23     TEDLAR     Air     106/2023 1:5:0.0PM     I Natural Gas Analysis- C02+02       673-001B     Influent 10-6-23     TEDLAR     Air     106/2023 1:5:0.0PM     I Natural Gas Analysis- C02+02       673-001B     Influent 10-6-23     TEDLAR     Air     106/2023 1:5:0.0PM     I Natural Gas Analysis- C02+02       106     Lot     Internation     Internation     Internation     Internation	Billings, MT 59107 SAMPLE CLIENT SAMPLEID BOTTLE BOTTLE COLLECTION ANALYTICA 2310673-001B Influent 10-6-23 TEDLAR Air 106/2023 1:15:00 PM 1 Natural Gas Analysis- C02+02 TEDLAR Air 106/2023 1:15:00 PM 1 Natural Gas Analysis- C02+02	ICAL COMMENTS B231 D1318	
2310673-001B Influent 10-6-23 TEDLAR Air 10/6/2023 1:15:00 PM I Natural Gas Analysis- CO2+O2	2310673-001B Influent 10-6-23 TEDLAR Air 10/6/2023 1:15:00 PM 1 Natural Gas Analysis- CO2+O2 Instructions constructions to additional contraction of the contract of the contr	5673-001B     Influent 10-6-23     TEDLAR     Air     10/6/2023     1:15:00 PM     I     Natural Gas Analysis- CO2+O2       References       References       Material Gas Analysis- CO2+O2       Influences       CO4+02       Influences       CO4+02       Influences       Influence       Influence <td c<="" td=""><td>6673-001B     Influent 10-6-23     TEDLAR     Air     10/6/2023 1:15:00 PM     I     Natural Gas Analysis- C02+02       RECTONS: CONVEXTS.       List of the convexts.       Date       List of the convexts.       Date       Date       Date       Date       Date       List of the convext.       Date       Date       Date       Date       Date       Date</td><td>2310673-001B Influent 10-6-23 TEDLAR Air 10/6/2023 1:15:00 PM I Natural Gas Analysis- CO2+O2 UNETRUCTION COMMENTS</td><td>B12101218</td></td>	<td>6673-001B     Influent 10-6-23     TEDLAR     Air     10/6/2023 1:15:00 PM     I     Natural Gas Analysis- C02+02       RECTONS: CONVEXTS.       List of the convexts.       Date       List of the convexts.       Date       Date       Date       Date       Date       List of the convext.       Date       Date       Date       Date       Date       Date</td> <td>2310673-001B Influent 10-6-23 TEDLAR Air 10/6/2023 1:15:00 PM I Natural Gas Analysis- CO2+O2 UNETRUCTION COMMENTS</td> <td>B12101218</td>	6673-001B     Influent 10-6-23     TEDLAR     Air     10/6/2023 1:15:00 PM     I     Natural Gas Analysis- C02+02       RECTONS: CONVEXTS.       List of the convexts.       Date       List of the convexts.       Date       Date       Date       Date       Date       List of the convext.       Date       Date       Date       Date       Date       Date	2310673-001B Influent 10-6-23 TEDLAR Air 10/6/2023 1:15:00 PM I Natural Gas Analysis- CO2+O2 UNETRUCTION COMMENTS	B12101218
	: CLIENT SAMPLE ID on all final reports. P	INUCTIONS / COMMENTS:         Inde 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.         Inde 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.         Inde 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.         Inde 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.         Inde 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.         Inde 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.         Inde the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results.         Inde the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab.         Inde the LAB ID on all final reports. Please e-mail results to lab.         Inde the LAB ID on all final reports. Please e-mail results to lab.         Inde the LAB ID on all final reports. Please e-mail results to lab.         Inde the LAB ID on all final reports.         Inde the LAB ID on all final reports.         Inde the LAB ID on all final reports. <th>MMENTS:         D 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.         D 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.         D and       Image: site Ample and site Ample and the ice. Thank you.         D are       Time: site Ample Ample</th> <th>Id another find the reaction of the second</th> <th></th>	MMENTS:         D 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.         D 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.         D and       Image: site Ample and site Ample and the ice. Thank you.         D are       Time: site Ample	Id another find the reaction of the second		
Date Time Received By Date Time.		Tarta Carta Lat	Date Time Received by Date Time Date Time	10/13/2023 8:10 AM Dress Trimes Description Dress Trimes HARDCOPY (extra t		

Comments

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Client:	HILCORI												
Project:	Sunray B	1 <b>B</b>											
Sample ID:	2310673-001adup	673-001adup SampType: DUP				TestCode: EPA Method 8015D: Gasoline Range							
Client ID:	Influent 10-6-23	Batch	n ID: GA	100590	RunNo: 100590								
Prep Date:	Prep Date:		Analysis Date: 10/19/2023			SeqNo: <b>36</b>	87273	Units: µg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	1400	250						0.587	20			
Surr: BFB		130000		100000		126	15	412	0	0			

#### 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

Page 3 of 5

2310673

02-Nov-23

WO#:

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: HILCORP ENERGY Project: Sunray B 1B

Sample ID: 2310673-001adup	SampType: <b>DUP</b>			Tes	tCode: EF					
Client ID: Influent 10-6-23	Batch ID: R100597			F	RunNo: 10	00597				
Prep Date:	Analysis Date: 10/19/2023		SeqNo: 3687769			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	2.0						0	20	
Toluene	42	5.0						12.2	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	2.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0 5.0						0	20 20	
2,2-Diciliolopioparie	ND	5.0						0	20	

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

Page 4 of 5

Page 108 of 180

WO#: 2310673

02-Nov-23

**Client:** 

**Project:** 

# **QC SUMMARY REPORT**

Released to Imaging: 4/9/2024 10:05:11 AM

Hall Environmental Analysis Laboratory, Inc

HILCORP ENERGY

Sunray B 1B

Sample ID: 2310673-001adup	SampT	ype: DU	P	Tes	tCode: EF	PA Method	8260B: Volati	les		
Client ID: Influent 10-6-23	Batch	n ID: <b>R1</b>	00597	F	RunNo: 10	00597				
Prep Date:	Analysis D	Date: 10	/19/2023	S	SeqNo: 36	687769	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	38	7.5						7.99	20	
Surr: Dibromofluoromethane	49		50.00		97.7	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.2	70	130	0	0	
Surr: Toluene-d8	46		50.00		92.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	50		50.00		101	70	130	0	0	

#### **Qualifiers:**

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

Reporting Limit RL

Page 5 of 5

#### WO#: 2310673

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3	ntal Analysis Labor 4901 Hawki Albuquerque, NM & 975 FAX: 505-345 v.hallenvironmenta	ns NE 87109 <b>Sam</b> -4107	nple Log-In C	heck List
Client Name: HILCORP ENERGY	Work Order Num	ber: 2310673		RcptNo:	1
Received By: Tracy Casarrubias Completed By: Tracy Casarrubias Reviewed By: SCM 10/13/23	10/13/2023 6:30:00 10/13/2023 7:19:00	,			
<ul> <li><u>Chain of Custody</u></li> <li>1. Is Chain of Custody complete?</li> <li>2. How was the sample delivered?</li> </ul>		Yes 🗌 <u>Courier</u>	No 🗹	Not Present	
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 🗌		
<ul><li>6. Sufficient sample volume for indicated test(s</li><li>7. Are samples (except VOA and ONG) proper</li></ul>		Yes 🗹 Yes 🗹	No 🗌 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 broke 11. Does paperwork match bottle labels?	n?	Yes □ Yes ☑	No 🔽 No 🗌	# of preserved bottles checked for pH:	
(Note discrepancies on chain of custody) 12. Are matrices correctly identified on Chain of	Custodv?	Yes 🔽	No 🗌	(<2 or Adjusted?	12 unless noted)
13. Is it clear what analyses were requested?	<b>,</b>	Yes 🗹	No 🗌		A 1
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗍	Checked by:	11-13-23
Special Handling (if applicable)				L	
15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions: Mailing address, 16. Additional remarks:	Date Via: phone number and Err	eMail 🔲 I	Phone 🗌 Fax	In Person 10/13/23	
17. <u>Cooler Information</u> Cooler No Temp °C Condition S 1 N/A Good Ye	eal Intact Seal No s	Seal Date	Signed By		

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Released to Imaging: 4/9/2024 10:05:11 AM

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	ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquergue. NM 87109		Analysis Request	(O) 403	DSIMS PCB's PCB's PCB's	70 / 05 8/808/s or 8/27 5 7/8/ 8 7/8/ 7 7 7 7 7 7 7 7 7 7 7 7 7 7		15D etho 3 Mé 3 Mé 3 Mé 3 Mé 10 7 0 7 0 7	BTEX / TPH:80 8081 Pc 8081 Pc RCRA 6 Cl, F, E 8220 (V 8220 (V 72481 Cc 72482 8220 (S 72482 8220 (S 72482 8200 (S 8								Remarks:		ossibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	Roject Name: SUNTAN B 1B	Project #:			Stuart Hyde	Sampler: Downy Burns On Ice: 100 Yes Z No	olers:	Including CF): N/A (°C)	tive 73 10673	100							arcounty Date Time	Received by: Via: Date Time	Intracted to other accredited laboratories. This serves as notice of this p
n-of-Custody Record	Client: PI: 1 CORP ENERGY Mitch Killowgh Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	□ Az Compliance □ Other	ype)		Date Time Matrix Sample Name	3 1315 Air Influent 10-6-23						(	Date: Time: Relinquished b:	Time: Relinquished by:	Released to Imaging: 4/9/2024 10:05:11 AM



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

November 03, 2023

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

RE: Sunray B 1B

OrderNo.: 2310A08

Dear Stuart Hyde:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 10/20/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B 1B

2310A08-001

**Project:** 

Lab ID:

**Analytical Report** Lab Order 2310A08

Date Reported: 11/3/2023

### Hall Environmental Analysis Laboratory, Inc.

Matrix: AIR

Client Sample ID: Influent 10-19-23 Collection Date: 10/19/2023 12:35:00 PM Received Date: 10/20/2023 7:30:00 AM

				2023 7.30.00 1101		
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: JJP	
Gasoline Range Organics (GRO)	1200	250	µg/L	50	10/31/2023 10:27:51 AM	
Surr: BFB	135	15-412	%Rec	50	10/31/2023 10:27:51 AM	
EPA METHOD 8260B: VOLATILES					Analyst: CCM	
Benzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Toluene	29	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Ethylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Methyl tert-butyl ether (MTBE)	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,2,4-Trimethylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,3,5-Trimethylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,2-Dichloroethane (EDC)	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,2-Dibromoethane (EDB)	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Naphthalene	ND	10	µg/L	50	10/30/2023 2:16:00 PM	
1-Methylnaphthalene	ND	20	µg/L	50	10/30/2023 2:16:00 PM	
2-Methylnaphthalene	ND	20	µg/L	50	10/30/2023 2:16:00 PM	
Acetone	ND	50	μg/L	50	10/30/2023 2:16:00 PM	
Bromobenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Bromodichloromethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Bromoform	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Bromomethane	ND	10	µg/L	50	10/30/2023 2:16:00 PM	
2-Butanone	ND	50	µg/L	50	10/30/2023 2:16:00 PM	
Carbon disulfide	ND	50	µg/L	50	10/30/2023 2:16:00 PM	
Carbon tetrachloride	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Chlorobenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Chloroethane	ND	10	µg/L	50	10/30/2023 2:16:00 PM	
Chloroform	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Chloromethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
2-Chlorotoluene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
4-Chlorotoluene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
cis-1,2-DCE	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
cis-1,3-Dichloropropene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,2-Dibromo-3-chloropropane	ND	10	µg/L	50	10/30/2023 2:16:00 PM	
Dibromochloromethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
Dibromomethane	ND	10	µg/L	50	10/30/2023 2:16:00 PM	
1,2-Dichlorobenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM	
1,3-Dichlorobenzene	ND	5.0	μg/L	50	10/30/2023 2:16:00 PM	
1,4-Dichlorobenzene	ND	5.0	μg/L	50	10/30/2023 2:16:00 PM	
Dichlorodifluoromethane	ND	5.0	μg/L	50	10/30/2023 2:16:00 PM	
1,1-Dichloroethane	ND	5.0	μg/L	50	10/30/2023 2:16:00 PM	
1,1-Dichloroethene	ND	5.0	μg/L	50	10/30/2023 2:16:00 PM	

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

**Qualifiers:** 

Analyte detected in the associated Method Blank в

Е

Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

ND Not Detected at the Reporting Limit

Sample Diluted Due to Matrix

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 1 of 5

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**CLIENT: HILCORP ENERGY** 

Sunray B 1B

2310A08-001

**Project:** 

Lab ID:

Analytical Report
Lab Order 2310A08

Date Reported: 11/3/2023

Hall	Environmental	Analysis	Laboratory,	Inc.

Client Sample ID: Influent 10-19-23 Collection Date: 10/19/2023 12:35:00 PM Received Date: 10/20/2023 7:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: CCM
1,2-Dichloropropane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,3-Dichloropropane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
2,2-Dichloropropane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,1-Dichloropropene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
2-Hexanone	ND	50	µg/L	50	10/30/2023 2:16:00 PM
Isopropylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
4-Isopropyltoluene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
4-Methyl-2-pentanone	ND	50	µg/L	50	10/30/2023 2:16:00 PM
Methylene chloride	ND	15	µg/L	50	10/30/2023 2:16:00 PM
n-Butylbenzene	ND	15	µg/L	50	10/30/2023 2:16:00 PM
n-Propylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
sec-Butylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Styrene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
tert-Butylbenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Tetrachloroethene (PCE)	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
trans-1,2-DCE	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
trans-1,3-Dichloropropene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,2,3-Trichlorobenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,1,1-Trichloroethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,1,2-Trichloroethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Trichloroethene (TCE)	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Trichlorofluoromethane	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
1,2,3-Trichloropropane	ND	10	µg/L	50	10/30/2023 2:16:00 PM
Vinyl chloride	ND	5.0	µg/L	50	10/30/2023 2:16:00 PM
Xylenes, Total	29	7.5	µg/L	50	10/30/2023 2:16:00 PM
Surr: Dibromofluoromethane	89.1	70-130	%Rec	50	10/30/2023 2:16:00 PM
Surr: 1,2-Dichloroethane-d4	91.5	70-130	%Rec	50	10/30/2023 2:16:00 PM
Surr: Toluene-d8	109	70-130	%Rec	50	10/30/2023 2:16:00 PM
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	50	10/30/2023 2:16:00 PM

Matrix: AIR

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. 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

Page 2 of 5

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### ANALYTICAL SUMMARY REPORT

November 02, 2023

Hall Environmental 4901 Hawkins St NE Ste D Albuquerque, NM 87109-4372 Work Order: B23101902 Quote ID: B15626 Project Name: **Tedlar Gas Analysis** Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 10/25/2023 for analysis. **Client Sample ID** Test Lab ID Collect Date Receive Date Matrix B23101902-001 2310A08-001B, Influent 10/19/23 12:35 10/25/23 Air Air Correction Calculations 10-19-23 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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Hall Environmental
Project:	Tedlar Gas Analysis
Lab ID:	B23101902-001
Client Sample ID:	2310A08-001B, Influent 10-19-23

Report Date: 11/02/23 Collection Date: 10/19/23 12:35 DateReceived: 10/25/23 Matrix: Air

					MCL/		
Analyses	Result	Units	Qualifiers	RL		Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.81	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Nitrogen	78.00	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Carbon Dioxide	0.16	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	10/26/23 10:57 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	10/26/23 10:57 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	10/26/23 10:57 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	10/26/23 10:57 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	10/26/23 10:57 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	10/26/23 10:57 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	10/26/23 10:57 / jrj
Air, % - The analysis was not corrected for air.	99.64			0.01		GPA 2261-95	10/26/23 10:57 / jrj

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

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

10/26/23 10:57 / jrj



0.83

Mol %

Billings, MT 406.252.6325 • Casper, WY 307925.05150 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

### **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client:	Hall Environmental				Work Order:	B2310	1902	Repo	rt Date:	11/02/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch:	R411208
Lab ID:	B23101903-001ADUP	12 Sam	ple Duplic	ate			Run: GCNG	A-B_231026A		10/26	23 12:42
Oxygen			18.1	Mol %	0.01				0.2	20	
Nitrogen			79.3	Mol %	0.01				0.1	20	
Carbon D	lioxide		0.88	Mol %	0.01				1.1	20	
Hydrogen	Sulfide		<0.01	Mol %	0.01					20	
Methane			0.02	Mol %	0.01					20	
Ethane			<0.01	Mol %	0.01					20	
Propane			<0.01	Mol %	0.01					20	
Isobutane	9		0.03	Mol %	0.01				0.0	20	
n-Butane			0.08	Mol %	0.01				0.0	20	
Isopentar	ne		0.11	Mol %	0.01				0.0	20	
n-Pentan	e		0.10	Mol %	0.01				9.5	20	
Hexanes	plus		1.44	Mol %	0.01				5.7	20	
Lab ID:	LCS102623	11 Labo	ratory Co	ntrol Sample			Run: GCNG	GA-B_231026A		10/26	23 14:30
Oxygen			0.59	Mol %	0.01	118	70	130			
Nitrogen			5.79	Mol %	0.01	96	70	130			
Carbon D	lioxide		1.01	Mol %	0.01	102	70	130			
Methane			74.8	Mol %	0.01	100	70	130			
Ethane			6.05	Mol %	0.01	101	70	130			
Propane			4.88	Mol %	0.01	99	70	130			
Isobutane	9		2.01	Mol %	0.01	100	70	130			
n-Butane			2.01	Mol %	0.01	100	70	130			
Isopentar	ne		1.01	Mol %	0.01	101	70	130			
n-Pentan	e		1.01	Mol %	0.01	101	70	130			

0.01

104

70

130

Hexanes plus

ENERG ABORATORIES

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### Work Order Receipt Checklist

### Hall Environmental

B231	01	902
		<b>JUZ</b>

Login completed by:	Danielle N. Harris		Date F	Received: 10/25/2023
Reviewed by:	lleprowse		Rec	eived by: dnh
Reviewed Date:	10/27/2023		Carri	er name: FedEx
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present
Custody seals intact on all sh	nipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present
Chain of custody present?		Yes 🗹	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	n 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 h (Exclude analyses that are co such as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all sh	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank tempe	erature:	8.8°C No Ice		
Containers requiring zero hea bubble that is <6mm (1/4").	adspace have no headspace or	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

iboratory kins NE 1 87109 15-3975 15-4107 46-4107					
Hall Environmental Analysis Laboratory 4901 Hawkins NE "Whaquerque. NAI 87409 TEL: 505-345-307 FAE: 505-345-410 <sup>7</sup> Website: www.hallenvironmental.com <b>B23161902</b>	(406) 252-6069			ANALYTICAL COMMENTS	
	FAN	EMAIL		NALYTIC	
l oF:	(406) 869-6253				10/19/2023 12:35:00 PM 1 Natural Gas Analysis
CHAIN OF CUSTODY RECORD PAGE	anona	ACCOUNT#		CONTAINERS COLLECTION DATE	/19/2023 12:35:00 PM
FODY R	s			MATRIN	
<b>VOF CUST</b>	Energy Laboratories			BOTTLE TYPE	TEDLAR
	COMPANY:	th Street	59107	CLIENT SAMPLE ID	10-19-23
HALL ENVIRONMENTAL ANALYSIS LABORATORY	SUB CONTRATOR: Energy Labs -Billings	1120 South 27th Street	P Billings, MT 59107	SAMPLE	B Influ
	SUB CONTRAT	ADDRESS:	CITV, STATE, ZIP	ITEM S.	1 2310.

	Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.	ORT TRANSMITTAL DESIRED.	Date Time UHARDOPY (extra cost) U FAA U EMAIL U ONLINE	FOR LAB USE ONLY	1012/11/22:15 Terro of samples C Attempt to Cool ?		Comments.	
	Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. F	Time: 7:56 AM Received By:	Time: Received By:		Time: Providence	RUSH Next BD		
MENTS:	and the CLIENT SA	Date: T10/20/2023	Date: 1		Date:	Standard OL		
SPECIAL INSTRUCTIONS / COMMENIS:	Please include the LAB ID	Relinquished By	Relinquished By:		Relinquished By:	TAT:		

Client:	HILCORI	PENERG	Y								
Project:	Sunray B	1B									
Sample ID:	2310a08-001adup	SampT	ype: DU	P	Tes	tCode: EF	A Method	8015D: Gasol	line Range	•	
Client ID:	Influent 10-19-23	Batch	n ID: GA	100845	F	RunNo: <b>1(</b>	0845				
Prep Date:		Analysis D	)ate: 10	/31/2023	S	SeqNo: 37	00405	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	1300	250						11.0	20	
Surr: BFB		140000		100000		141	15	412	0	0	

#### 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

2310A08

03-Nov-23

WO#:

### **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Client:	HILCORP EN
Project:	Sunray B 1B

Sample ID: 2310A08-001adup	SampT	ype: DU	Р	Tes	tCode: EF	PA Method	8260B: Volatil	es		
Client ID: Influent 10-19-23	Batch	ID: R10	00818	F	RunNo: <b>1(</b>	00818				
Prep Date:	Analysis D	ate: 10	/30/2023	Ş	SeqNo: 36	699532	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	5.0					0	0	20	
Toluene	26	5.0						11.5	20	
Ethylbenzene	ND	5.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	5.0						0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	20	
1,2-Dichloroethane (EDC)	ND	5.0						0	20	
1,2-Dibromoethane (EDB)	ND	5.0						0	20	
Naphthalene	ND	10						0	20	
1-Methylnaphthalene	ND	20						0	20	
2-Methylnaphthalene	ND	20						0	20	
Acetone	ND	50						0	20	
Bromobenzene	ND	5.0						0	20	
Bromodichloromethane	ND	5.0						0	20	
Bromoform	ND	5.0						0	20	
Bromomethane	ND	10						0	20	
2-Butanone	ND	50						0	20	
Carbon disulfide	ND	50						0	20	
Carbon tetrachloride	ND	5.0						0	20	
Chlorobenzene	ND	5.0						0	20	
Chloroethane	ND	10						0	20	
Chloroform	ND	5.0						0	20	
Chloromethane	ND	5.0						0	20	
2-Chlorotoluene	ND	5.0						0	20	
4-Chlorotoluene	ND	5.0						0	20	
cis-1,2-DCE	ND	5.0						0	20	
cis-1,3-Dichloropropene	ND	5.0						0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	20	
Dibromochloromethane	ND	5.0						0	20	
Dibromomethane	ND	10						0	20	
1,2-Dichlorobenzene	ND	5.0						0	20	
1,3-Dichlorobenzene	ND	5.0						0	20	
1,4-Dichlorobenzene	ND	5.0						0	20	
Dichlorodifluoromethane	ND	5.0						0	20	
1,1-Dichloroethane	ND	5.0						0	20	
1,1-Dichloroethene	ND	5.0						0	20	
1,2-Dichloropropane	ND	5.0						0	20	
1,3-Dichloropropane	ND	5.0						0	20	
2,2-Dichloropropane	ND	5.0						0	20	

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL

Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank В

Е Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 4 of 5

WO#: 2310A08

03-Nov-23

### **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

**Qualifiers:** 

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of standard limits. If undiluted results may be estimated. S

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- Analyte detected in the associated Method Blank В Е
- J

RL

- Above Quantitation Range/Estimated Value
- Analyte detected below quantitation limits
- Р Sample pH Not In Range

Reporting Limit

WO#:	231
	03-Na

**Client:** HILCORP ENERGY **Project:** Sunray B 1B

Sample ID: 2310A08-001adup	SampTy	ype: DU	2	Tes	tCode: EF	PA Method	8260B: Volati	es		
Client ID: Influent 10-19-23	Batch	ID: <b>R10</b>	0818	R	unNo: <b>10</b>	00818				
Prep Date:	Analysis Da	ate: 10/	/30/2023	S	SeqNo: 36	699532	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	5.0						0	20	
Hexachlorobutadiene	ND	5.0						0	20	
2-Hexanone	ND	50						0	20	
Isopropylbenzene	ND	5.0						0	20	
4-Isopropyltoluene	ND	5.0						0	20	
4-Methyl-2-pentanone	ND	50						0	20	
Methylene chloride	ND	15						0	20	
n-Butylbenzene	ND	15						0	20	
n-Propylbenzene	ND	5.0						0	20	
sec-Butylbenzene	ND	5.0						0	20	
Styrene	ND	5.0						0	20	
tert-Butylbenzene	ND	5.0						0	20	
1,1,1,2-Tetrachloroethane	ND	5.0						0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	20	
Tetrachloroethene (PCE)	ND	5.0						0	20	
trans-1,2-DCE	ND	5.0						0	20	
trans-1,3-Dichloropropene	ND	5.0						0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	20	
1,2,4-Trichlorobenzene	ND	5.0						0	20	
1,1,1-Trichloroethane	ND	5.0						0	20	
1,1,2-Trichloroethane	ND	5.0						0	20	
Trichloroethene (TCE)	ND	5.0						0	20	
Trichlorofluoromethane	ND	5.0						0	20	
1,2,3-Trichloropropane	ND	10						0	20	
Vinyl chloride	ND	5.0						0	20	
Xylenes, Total	25	7.5						13.2	20	
Surr: Dibromofluoromethane	44		50.00		87.6	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	47		50.00		93.4	70	130	0	0	
Surr: Toluene-d8	54		50.00		108	70	130	0	0	
Surr: 4-Bromofluorobenzene	52		50.00		105	70	130	0	0	

0A08

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-397	4901 Hawkin buquerque, NM 8	<sup>s NE</sup> 7109 Sam 4107	ple Log-In Ch	eck List
Client Name: HILCORP ENERGY	Work Order Numbe	er: 2310A08		RcptNo:	1
Received By: Cheyenne Cason	10/20/2023 7:30:00 A	λM	Chend Chend		
Completed By: Cheyenne Cason	10/20/2023 7:52:50 A	λM	Chene		
Reviewed By: TMC	10/20/23				
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
2. How was the sample delivered?		<u>Courier</u>	, chu: h	1 0/20/23	
<u>Log In</u>		1 pl	NC CON IN		
3. Was an attempt made to cool the samples?		Yes 🗹 🕻	No 🗌	1 10/20/23	
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(	\$)?	Yes 🗹	No 🗌		
$7_{\rm \cdot}$ Are samples (except VOA and ONG) proper	ly 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 broke	en?	Yes	No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆		12 unless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes 🔽	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌	A	in 12/20123
14. Were all holding times able to be met? (If no. notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	un ivjaujos
Special Handling (if applicable)					
15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date:	an an international construction			
By Whom:	Via:	🗌 eMail 🔄 F	Phone 🗌 Fax	In Person	
Regarding:				1	
Client Instructions:				and the state of the	
16. Additional remarks:			_		
17. <u>Cooler Information</u> Cooler No Temp <sup>o</sup> C Condition S 1 NA Good Ye	eal Intact Seal No s NA	Seal Date	Signed By		

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HALL ENVIRONMENTAL	www.hallenvironmental.com	ζ ',	rer. 000-04-0-0910 Fax 000-540-410/ Analysis Request	((	ЬO⁺' 2C RIW2 БCB, <sup>2</sup> СВ,2	) DRG (102, 1 04.1) 04.1) 02, 1 02, 1 0, 1 0, 1 0, 1 0, 1 0, 1 0, 1 0, 1 0	03' 10 0 9 20	setici etho y 83 hr, N OA) emi- nifor	BTEX / BTEX / BU81 Pc B081 Pc B081 Pc B108 (M PAHs b C1, F, B B270 (S C1, F, B B250 (V S) 0531 Cc S) 0531 Cc C1 S) 0731 Cc S) 0731							Remarks:		ossibility. Any sub-contracted data will be clearly notated on the analytical report.
 HILLOTO CUSTODY RECORD TURN-Around time:	Ittch Killowin Project Name: Sinn ray	Project #:		Project Manager:	D Level 4 (Full Validation) Stuart Hydre	□ Az Compliance Sampler: ひゃいいり じいいいく □ Other On Ice: N Yes □ No	# of Coolers: /	Cooler Temp(Including CF); MA (°C)	Matrix Sample Name Type and # Type 2310408	- 001						Relinquished by: Via: Date Time Received by: Via: Date Time Received by: Why Why 10/19/5-152/C	by: Via: Date	Hall Environmental may be subcontracted to other accredited laboratories
	AHN, Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	Accreditation:	🗆 EDD (Type)		Date Time	10-19 12:35					$\overline{}$	Date: Time: [0-14-33] [5:45	Date: Time: し/の/レイフィータ	Released to In



**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

November 08, 2023 Stuart Hyde Hilcorp Energy PO Box 61529 Houston, TX 77208-1529 TEL: (337) 276-7676 FAX:

RE: Sunray B 1B

OrderNo.: 2310D01

Dear Stuart Hyde:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 10/27/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

**Analytical Report** Lab Order 2310D01

Date Reported: 11/8/2023

CLIENT: Hilcorp Energy		Clier	nt Sample I	D: Inl	et					
<b>Project:</b> Sunray B 1B			-		26/2023 9:40:00 AM					
Lab ID: 2310D01-001	Matrix: AIR         Received Date: 10/27/2023 7:30:00 AM									
		K			10/21/2023 1.50.00 110					
Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	JJP				
Gasoline Range Organics (GRO)	960	250	µg/L	50	10/31/2023 12:02:05 PM	/ GA100				
Surr: BFB	123	15-412	%Rec	50	10/31/2023 12:02:05 PM	/I GA100				
EPA METHOD 8260B: VOLATILES					Analyst	ССМ				
Benzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
Toluene	26	5.0	μg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>,</sup>				
Ethylbenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM					
Methyl tert-butyl ether (MTBE)	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM					
1,2,4-Trimethylbenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM					
1,3,5-Trimethylbenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R1008				
1,2-Dichloroethane (EDC)	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM					
1,2-Dibromoethane (EDB)	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R1008				
Naphthalene	ND	10	µg/L	50	10/30/2023 3:53:00 PM	R1008				
1-Methylnaphthalene	ND	20	µg/L	50	10/30/2023 3:53:00 PM	R1008				
2-Methylnaphthalene	ND	20	µg/L	50	10/30/2023 3:53:00 PM	R1008				
Acetone	ND	50	µg/L	50	10/30/2023 3:53:00 PM	R1008				
Bromobenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				
Bromodichloromethane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>,</sup>				
Bromoform	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Bromomethane	ND	10	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
2-Butanone	ND	50	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Carbon disulfide	ND	50	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Carbon tetrachloride	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Chlorobenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Chloroethane	ND	10	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Chloroform	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
Chloromethane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
2-Chlorotoluene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>2</sup>				
4-Chlorotoluene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
cis-1,2-DCE	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
cis-1,3-Dichloropropene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
1,2-Dibromo-3-chloropropane	ND	10	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
Dibromochloromethane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
Dibromomethane	ND	10	μg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
1,2-Dichlorobenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R1008 <sup>-</sup>				
1,3-Dichlorobenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				
1,4-Dichlorobenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				
Dichlorodifluoromethane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				
1,1-Dichloroethane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				
1,1-Dichloroethene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R1008				

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

**Qualifiers:** 

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

ND Not Detected at the Reporting Limit

Sample Diluted Due to Matrix

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Е Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 1 of 2

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Н

**CLIENT:** Hilcorp Energy

**Project:** 

Sunray B 1B

Analytical Report
Lab Order 2310D01

	Hall Environmental Analysis Laboratory, Inc.	Date Reported: 11/8/2023
--	--	--------------------------

Client Sample ID: Inlet Collection Date: 10/26/2023 9:40:00 AM

Lab ID: 2310D01-001	Matrix: AIR	<b>Received Date:</b> 10/27/2023 7:30:00 AM								
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 8260B: VOLATILES					Analyst:	ССМ				
1,2-Dichloropropane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
1,3-Dichloropropane	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
2,2-Dichloropropane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,1-Dichloropropene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Hexachlorobutadiene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
2-Hexanone	ND	50	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Isopropylbenzene	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
4-Isopropyltoluene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
4-Methyl-2-pentanone	ND	50	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Methylene chloride	ND	15	µg/L	50	10/30/2023 3:53:00 PM	R10081				
n-Butylbenzene	ND	15	µg/L	50	10/30/2023 3:53:00 PM	R10081				
n-Propylbenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
sec-Butylbenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
Styrene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
tert-Butylbenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,1,1,2-Tetrachloroethane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,1,2,2-Tetrachloroethane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
Tetrachloroethene (PCE)	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
trans-1,2-DCE	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
trans-1,3-Dichloropropene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,2,3-Trichlorobenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,2,4-Trichlorobenzene	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,1,1-Trichloroethane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,1,2-Trichloroethane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
Trichloroethene (TCE)	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
Trichlorofluoromethane	ND	5.0	μg/L	50	10/30/2023 3:53:00 PM	R10081				
1,2,3-Trichloropropane	ND	10	μg/L	50	10/30/2023 3:53:00 PM	R10081				
Vinyl chloride	ND	5.0	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Xylenes, Total	21	7.5	µg/L	50	10/30/2023 3:53:00 PM	R10081				
Surr: Dibromofluoromethane	91.1	70-130	%Rec	50	10/30/2023 3:53:00 PM	R10081				
Surr: 1,2-Dichloroethane-d4	97.8	70-130	%Rec	50	10/30/2023 3:53:00 PM	R10081				
Surr: Toluene-d8	108	70-130	%Rec	50	10/30/2023 3:53:00 PM	R10081				
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	50	10/30/2023 3:53:00 PM	R10081				

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

Qualifiers:

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

- D Sample Diluted Due to MatrixH 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

Page 2 of 2

\*



### ANALYTICAL SUMMARY REPORT

November 08, 2023

Hall Environmer 4901 Hawkins S Albuquerque, N	t NE Ste D				
Work Order: Project Name:	B23102199 Not Indicated	Quote ID: B1562	6		
Energy Laborato	ories Inc Billings MT rece	ived the following 1	sample for Hall	Environmen	tal on 10/31/2023 for analysis.
Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B23102199-001	2310D01-001B, Inlet	10/26/23 9:40	10/31/23	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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:Hall EnvironmentalProject:Not IndicatedLab ID:B23102199-001Client Sample ID:2310D01-001B, Inlet

Report Date: 11/08/23 Collection Date: 10/26/23 09:40 DateReceived: 10/31/23 Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.80	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Nitrogen	78.03	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Carbon Dioxide	0.15	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Hexanes plus	0.02	Mol %		0.01		GPA 2261-95	11/02/23 09:45 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
Hexanes plus	0.008	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
GPM Total	0.008	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
GPM Pentanes plus	0.008	gpm		0.001		GPA 2261-95	11/02/23 09:45 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	11/02/23 09:45 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	11/02/23 09:45 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	11/02/23 09:45 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	11/02/23 09:45 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	11/02/23 09:45 / jrj
Air, % - The analysis was not corrected for air.	99.60			0.01		GPA 2261-95	11/02/23 09:45 / jrj

- The analysis was not corrected for air.

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 11/02/23 09:45 / jrj



Billings, MT 406.252.6325 • Casper, WY 307.235.05150 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

### **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client:	Hall Environmental	

Client:	Hall Environmental				Work Order:	B23102199 Re			Report Date: 11/08/23			
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method:	GPA 2261-95									Batch:	R411585	
Lab ID:	B23102199-001ADUP	12 Sam	ple Duplic	ate			Run: GCNG	GA-B_231102A		11/02/	/23 10:13	
Oxygen			21.8	Mol %	0.01				0.0	20		
Nitrogen			78.0	Mol %	0.01				0.0	20		
Carbon D	Vioxide		0.15	Mol %	0.01				0.0	20		
Hydroger	n 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	e		<0.01	Mol %	0.01					20		
n-Butane			<0.01	Mol %	0.01					20		
Isopentar	ne		<0.01	Mol %	0.01					20		
n-Pentan	e		<0.01	Mol %	0.01					20		
Hexanes	plus		0.02	Mol %	0.01				0.0	20		
Lab ID:	LCS110223	11 Labo	oratory Co	ntrol Sample	•		Run: GCNG	GA-B_231102A		11/02	/23 12:50	
Oxygen			0.60	Mol %	0.01	120	70	130				
Nitrogen			5.94	Mol %	0.01	99	70	130				
Carbon D	Dioxide		0.99	Mol %	0.01	100	70	130				
Methane			74.4	Mol %	0.01	99	70	130				
Ethane			5.97	Mol %	0.01	99	70	130				
Propane			5.42	Mol %	0.01	110	70	130				
Isobutane	e		1.98	Mol %	0.01	99	70	130				
n-Butane			1.98	Mol %	0.01	99	70	130				
Isopentar	ne		1.00	Mol %	0.01	100	70	130				
n-Pentan	e		1.00	Mol %	0.01	100	70	130				
Hexanes	plus		0.77	Mol %	0.01	96	70	130				

ENERGY ABORATORIES

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### Work Order Receipt Checklist

### Hall Environmental

B231	021	99
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Danielle N. Harris	Date Received: 10/31/2023						
darcy	Received by: lel						
11/3/2023		Carrier name: FedEx					
good condition?	Yes 🗸	No 🗌	Not Present				
hipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Present				
ample bottles?	Yes	No 🗌	Not Present 🗹				
	Yes 🖌	No 🗌					
en relinquished and received?	Yes 🖌	No 🗌					
n sample labels?	Yes 🖌	No 🗌					
/bottle?	Yes 🔽	No 🗌					
	Yes 🖌	No 🗌					
indicated test?	Yes 🗹	No 🗌					
nolding time? onsidered field parameters Ifite, Ferrous Iron, etc.)	Yes 🗹	No 🗌					
hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable				
erature:	12.4°C No Ice						
adspace have no headspace or	Yes	No 🗌	No VOA vials submitted				
receipt?	Yes	No 🗌	Not Applicable				
	darcy 11/3/2023 good condition? hipping container(s)/cooler(s)? ample bottles? ample bottles? en relinquished and received? a sample labels? /bottle? indicated test? holding time? onsidered field parameters lifte, Ferrous Iron, etc.) hipping container(s)/cooler(s)? erature: adspace have no headspace or	darcy         11/3/2023         good condition?       Yes ☑         hipping container(s)/cooler(s)?       Yes ☑         ample bottles?       Yes ☑         ample bottles?       Yes ☑         en relinquished and received?       Yes ☑         h sample labels?       Yes ☑         /bottle?       Yes ☑         indicated test?       Yes ☑         indicated test?       Yes ☑         holding time?       Yes ☑         onsidered field parameters       Yes ☑         iffte, Ferrous Iron, etc.)       Yes ☑         hipping container(s)/cooler(s)?       Yes □         erature:       12.4°C No Ice         adspace have no headspace or       Yes □	darcy       Rec         11/3/2023       Carrie         good condition?       Yes        No         hipping container(s)/cooler(s)?       Yes        No         ample bottles?       Yes       No         ample bottles?       Yes        No         en relinquished and received?       Yes        No         en relinquished and received?       Yes        No         /bottle?       Yes        No         /bottle?       Yes        No         indicated test?       Yes        No         nolding time?       Yes        No         onsidered field parameters       Yes        No         intic, Ferrous Iron, etc.)       Yes        No         hipping container(s)/cooler(s)?       Yes       No         erature:       12.4°C No Ice       Mo				

#### **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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

----:40 CHAIN OF CUSTODY RECORD PAGE 1

Hall Environmental Analysis Laboratory 4901 Hawkins NE

. Whughergue, NM 87109	TEL: 505-345-39 <sup>-5</sup>	FAX: 505-345-4107	Website: www.hallenvironmental.com	823102199	(406) 252-6069			
					FAN	EMAIL		

(406) 869-6253

PHONE

**Energy Laboratories** 

SUB CONTRATOR Energy Labs -Billings COMPANY.

ADDRESS		1120 South 27th Street			ACCOUNT #.	EMAIL
CITY, S	CHY, STATE, ZIP. Billin;	Billings, MT 59107				
		,1			NOLLEGI	# CONTA
ITEM	I SAMPLE	CLIENT SAMPLE ID	TYPE	MATRIN		ANALYTICAL COMMENTS
	1 2310D01-001B Inlet	Inlet	TEDLAR	Air	10/26/2023 9.40.00 AM	10/26/2023 9:40:00 AM 1 Natural Gas Analysis

SPECIAL INSTRUCTIONS/COMMENTS: Please include the LAB ID and the CLIENT SAMPLE ID on all final reports.	MENTS: and the CLJENT 5	SAMPLE ID on	all final reports. Please e-mail results	to lab@hallenvironmental	Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.
Relinquished By Conce	Date: 10/27/2023	Time: 10:05 AM	Received By:	Date: Time:	ORT TRANSMITTAL
Relinquished By:	Date:	Time.	Received By	Date: Time:	ENIALL
Relinquished By:	Date:	Tme:	Received By Lypehi Lehand	leband Why 12 man 15:15	FOR LAD USE UNL 7 Terms of samples C Attempt to Cool ?
TAT:	Standard L	RUSH	Next BD	3d BD	

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3	ıtal Analysis Labor 4901 Hawkir Albuquerque, NM 8 975 FAX: 505-345- v.hallenvironmenta	s NE 7109 Sam 4107	ple Log-In Che	eck List
Client Name: Hilcorp Energy	Work Order Num	ber: 2310D01		RcptNo: 1	
Received By: Cheyenne Cason Completed By: Cheyenne Cason Reviewed By: Th 10/27/27	10/27/2023 7:30:00 10/27/2023 10:01:0		Clent Clent		
Chain of Custody 1. Is Chain of Custody complete?		Yes 🔽	No 🗌	Not Present	
2. How was the sample delivered?		<u>Client</u> (C M (	NA1123	our wiohats	
Log In 3. Was an attempt made to cool the samples?		Yes 🗌	No 🗹	PH W W	
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 🗌		
<ul> <li>6. Sufficient sample volume for indicated test(s</li> <li>7. Are samples (except VOA and ONG) propertion</li> </ul>		Yes ☑ Yes ☑	No 🗌 No 🗐		
8. Was preservative added to bottles?		Yes	No 🗹	NA 🗌	
9. Received at least 1 vial with headspace <1/4 10. Were any sample containers received broke		Yes □ Yes □	No 🗌 No 🗹	NA 🗹	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH: (<2 or >1	2 unless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌	120	m inhip
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by X	11 10/01/07
Special Handling (if applicable)					
15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date Via:		Phone 🗌 Fax	In Person	
16. Additional remarks:					
	eal Intact Seal No t Present NA	Seal Date	Signed By		

Page 133 of 180

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Page 134 of 180		ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	
	ound Time:	ndard 🗆 Rush	Name:	JUNICAY 5#12		

	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	(Ju	SMISC PO4, S	4.1) or 827( 2,	VO 10 < 19 < 19 < 19 < 19	etho y 83 (AO (AO) emi- emi-	8081 Pe EDB (M PAHs b RCRA 8 8260 (V 8270 (S 70tal Cc 0 8270 (S 70 8270 (S 70 80 80 80 80 80 80 80 80 80 80 80 80 80	×			Provide the second	A DESCRIPTION OF A DESC		[A. 1.1.] And the state of t		2. A second data the constraint has positively and with the constraint positive second sec	The second structure is a second s
			490	Tel					-	10	X3T8 08:H9T							 	 	Remarks:	
Turn-Around Time:	🖾 Standard 🛛 Rush		Surray 5#15	Project #:	AND A CONTRACT OF A CONTRACT O	Project Manager:	st Hyde	ž	lers:/	naluding CF): NA (°C)	tive HEAL No.	- 000		The generation of the first second se		and the second se	and the second devices the second			Received by: Via: Date Time F	ia: wm 101
Chain-of-Custody Record	Client: H.ilcorp	Mitch Killowh	Mailing Address: 1/(L/ Jours St	Houston TX	Phone #:	email or Fax#: while of while of hile of con	e. D	□ Az Con			Date Time Matrix Sample Name	3 0940 AIL								Date: Time: Relindnished by	Date: Time: Relinquished by: 02u/23 183u UNW UQUA

Released to maging: 4/9/2024 10:03:17 And the viconmental 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.



November 02, 2023

Stuart Hyde HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

RE: Sunray B 1B

OrderNo.: 2310675

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/13/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B 1B

2310675-001

**Project:** 

Lab ID:

Analyses

Surr: BFB

Benzene

**Analytical Report** Lab Order 2310675

#### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/2/2023 Client Sample ID: Influent 10-12-23

Collection Date: 10/12/2023 2:20:00 PM Matrix: AIR Received Date: 10/13/2023 6:30:00 AM Result **RL** Qual Units DF **Date Analyzed EPA METHOD 8015D: GASOLINE RANGE** Analyst: JJP Gasoline Range Organics (GRO) 250 µg/L 10/20/2023 11:09:25 AM 1800 50 10/20/2023 11:09:25 AM 148 15-412 %Rec 50 **EPA METHOD 8260B: VOLATILES** Analyst: JR ND 2.0 µg/L 50 10/19/2023 11:12:28 AM

Delizene	ND	2.0	µg/∟	50	10/19/2023 11.12.20 AW
Toluene	47	5.0	µg/L	50	10/19/2023 11:12:28 AM
Ethylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Methyl tert-butyl ether (MTBE)	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2,4-Trimethylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,3,5-Trimethylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2-Dichloroethane (EDC)	ND	2.0	µg/L	50	10/19/2023 11:12:28 AM
1,2-Dibromoethane (EDB)	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Naphthalene	ND	10	µg/L	50	10/19/2023 11:12:28 AM
1-Methylnaphthalene	ND	20	µg/L	50	10/19/2023 11:12:28 AM
2-Methylnaphthalene	ND	20	µg/L	50	10/19/2023 11:12:28 AM
Acetone	ND	50	µg/L	50	10/19/2023 11:12:28 AM
Bromobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Bromodichloromethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Bromoform	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Bromomethane	ND	10	µg/L	50	10/19/2023 11:12:28 AM
2-Butanone	ND	50	µg/L	50	10/19/2023 11:12:28 AM
Carbon disulfide	ND	50	µg/L	50	10/19/2023 11:12:28 AM
Carbon tetrachloride	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Chlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Chloroethane	ND	10	µg/L	50	10/19/2023 11:12:28 AM
Chloroform	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Chloromethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
2-Chlorotoluene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
4-Chlorotoluene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
cis-1,2-DCE	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
cis-1,3-Dichloropropene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2-Dibromo-3-chloropropane	ND	10	µg/L	50	10/19/2023 11:12:28 AM
Dibromochloromethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Dibromomethane	ND	10	µg/L	50	10/19/2023 11:12:28 AM
1,2-Dichlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,3-Dichlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,4-Dichlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Dichlorodifluoromethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1-Dichloroethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1-Dichloroethene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank в

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits Р

Sample pH Not In Range

Reporting Limit

RL

Page 1 of 3

\*

**CLIENT: HILCORP ENERGY** 

Sunray B 1B

2310675-001

**Project:** 

Lab ID:

Analytical Report Lab Order 2310675

Date Reported: 11/2/2023

Client Sample ID: Influent 10-12-23 Collection Date: 10/12/2023 2:20:00 PM Received Date: 10/13/2023 6:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: <b>JR</b>
1,2-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,3-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
2,2-Dichloropropane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1-Dichloropropene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Hexachlorobutadiene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
2-Hexanone	ND	50	µg/L	50	10/19/2023 11:12:28 AM
Isopropylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
4-Isopropyltoluene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
4-Methyl-2-pentanone	ND	50	µg/L	50	10/19/2023 11:12:28 AM
Methylene chloride	ND	15	µg/L	50	10/19/2023 11:12:28 AM
n-Butylbenzene	ND	15	µg/L	50	10/19/2023 11:12:28 AM
n-Propylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
sec-Butylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Styrene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
tert-Butylbenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Tetrachloroethene (PCE)	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
trans-1,2-DCE	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
trans-1,3-Dichloropropene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2,3-Trichlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1,1-Trichloroethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,1,2-Trichloroethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Trichloroethene (TCE)	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Trichlorofluoromethane	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
1,2,3-Trichloropropane	ND	10	µg/L	50	10/19/2023 11:12:28 AM
Vinyl chloride	ND	5.0	µg/L	50	10/19/2023 11:12:28 AM
Xylenes, Total	51	7.5	µg/L	50	10/19/2023 11:12:28 AM
Surr: Dibromofluoromethane	97.7	70-130	%Rec	50	10/19/2023 11:12:28 AM
Surr: 1,2-Dichloroethane-d4	88.8	70-130	%Rec	50	10/19/2023 11:12:28 AM
Surr: Toluene-d8	93.0	70-130	%Rec	50	10/19/2023 11:12:28 AM
Surr: 4-Bromofluorobenzene	99.3	70-130	%Rec	50	10/19/2023 11:12:28 AM

Matrix: AIR

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

Qualifiers:

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D Sample Diluted Due to MatrixH 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

RL Rep

Page 2 of 3

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### ANALYTICAL SUMMARY REPORT

November 01, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D				
Work Order: Project Name:	B23101316 C	Quote ID: B15626			
		C C	mple for Hall ceive Date	Environment Matrix	tal on 10/17/2023 for analysis. Test
B23101316-001	2310675-001B, Influent 10-12-23	10/12/23 14:20	10/17/23	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:



#### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:Hall EnvironmentalProject:Not IndicatedLab ID:B23101316-001Client Sample ID:2310675-001B, Influent 10-12-23

Report Date: 11/01/23 Collection Date: 10/12/23 14:20 DateReceived: 10/17/23 Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.69	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Nitrogen	78.00	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Carbon Dioxide	0.22	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
sopentane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Hexanes plus	0.09	Mol %		0.01		GPA 2261-95	10/19/23 11:53 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
sobutane	< 0.001	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
sopentane	< 0.001	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
Hexanes plus	0.038	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
GPM Total	0.038	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
SPM Pentanes plus	0.038	gpm		0.001		GPA 2261-95	10/19/23 11:53 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	4			1		GPA 2261-95	10/19/23 11:53 / jrj
Net BTU per cu ft @ std cond. (LHV)	4			1		GPA 2261-95	10/19/23 11:53 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	10/19/23 11:53 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	10/19/23 11:53 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	10/19/23 11:53 / jrj
Air, % - The analysis was not corrected for air.	99.11			0.01		GPA 2261-95	10/19/23 11:53 / jrj

- The analysis was not corrected for air.

#### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 10/19/23 11:53 / jrj



Billings, MT 406.252.6325 • Casper, WY 307.55.0515 f 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

### **QA/QC Summary Report**

Prepared by Billings, MT Branch

Work Order: B23101316

Report Date: 11/01/23

onent.						Report Date: 11/01/23					
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch	R410813
Lab ID:	B23101079-004ADUP	12 Sar	mple Duplic	ate			Run: GCNG	GA-B_231019A		10/19	/23 14:38
Oxygen			0.83	Mol %	0.01				1.2	20	
Nitrogen			14.4	Mol %	0.01				0.4	20	
Carbon D	Dioxide		0.03	Mol %	0.01				0.0	20	
Hydroger	n Sulfide		<0.01	Mol %	0.01					20	
Methane			83.6	Mol %	0.01				0.1	20	
Ethane			0.75	Mol %	0.01				0.0	20	
Propane			0.21	Mol %	0.01				0.0	20	
Isobutane	e		0.09	Mol %	0.01				12	20	
n-Butane			0.03	Mol %	0.01				0.0	20	
Isopentar	ne		<0.01	Mol %	0.01					20	
n-Pentan	e		<0.01	Mol %	0.01					20	
Hexanes	plus		<0.01	Mol %	0.01					20	
Lab ID:	LCS101923	11 Lat	oratory Co	ntrol Sample			Run: GCNG	SA-B_231019A		10/19	/23 15:12
Oxygen			0.60	Mol %	0.01	120	70	130			
Nitrogen			6.00	Mol %	0.01	100	70	130			
Carbon D	Dioxide		0.99	Mol %	0.01	100	70	130			
Methane			74.1	Mol %	0.01	99	70	130			
Ethane			5.98	Mol %	0.01	100	70	130			
Propane			5.56	Mol %	0.01	113	70	130			
Isobutane	e		1.98	Mol %	0.01	99	70	130			
n-Butane			1.99	Mol %	0.01	99	70	130			
Isopentar	ne		1.03	Mol %	0.01	103	70	130			
n-Pentan	e		1.02	Mol %	0.01	102	70	130			
Hexanes	plus		0.76	Mol %	0.01	95	70	130			

ABORATORIES

Trust our People. Trust our Data. ENERG www.energylab.com

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B23101316

## Work Order Receipt Checklist

### Hall Environmental

Login completed by:	Yvonna E. Smith		Date	e Received: 10/17/2023	
Reviewed by:	lleprowse		R	eceived by: dnh	
Reviewed Date:	10/21/2023		Ca	arrier name: FedEx	
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present	
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present 🗹	
Chain of custody present?		Yes 🗹	No 🗌		
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗹	No 🗌		
Samples in proper container	r/bottle?	Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗹	No 🗌		
Sufficient sample volume fo	r indicated test?	Yes 🗹	No 🗌		
All samples received within (Exclude analyses that are c such as pH, DO, Res Cl, St	considered field parameters	Yes 🗸	No 🗌		
Temp Blank received in all s	shipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	erature:	15.2°C No Ice			
Containers requiring zero he bubble that is <6mm (1/4").	eadspace have no headspace or	Yes	No 🗌	No VOA vials submitted	
Water - pH acceptable upon	n 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

State Contractor     Energy Laboratories     PHONE     (406) 869-6253     PAL     (406) 252-6069       ADMERS     1200 South 27th Street     ACCOUNT &     ACCOUNT &     (406) 869-6253     PAL     (406) 252-6069       ADMERS     1200 South 27th Street     ACCOUNT &     ACCOUNT &     ACCOUNT &     (406) 869-6253     PAL       ADMERS     1200 South 27th Street     ACCOUNT &     ACCOUNT &     ACCOUNT &     ACCOUNT &       ITIM     SAMPLE     CLIENT SAMPLE ID     BOTTLE     AMALINIX &     DATE     AMALYTICAL COMMENTS       1     2310675-0018 Influent 10-12-23     TEDLAR     Air     10/12/02/32/2000 PM     I Natural Gas Analysis- CO2+O2     S231 OI 31 U	ANTORE     Energy Laboratories     MONE     (406) 869-6253     IVA       8     1120 South 27th Street     ACCUMP #     (406) 869-6253     IVA       0.016.0P     Billings, NT 59107     ACCUMP #     MALL       0.016.0P     Billings, NT 59107     ANALYTICAL       2310675-001B     Influent 10-12.23     BOTTLE     DATE     ANALYTICAL       2310675-001B     Influent 10-12.23     TEDLAR     AIN     10122023 220:00 PM     I Matural Gas Analysis-C02+02       2310675-001B     Influent 10-12.23     TEDLAR     AIN     10122023 220:00 PM     I Matural Gas Analysis-C02+02	ENVIRONMENTAL ANALYSIS LABORATORY		CUSTODY RECORD		Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 7EL: 505-345-3975 FAX: 505-345-4107 Websne: www.hallenvironmental.com
SAMPLE     CLIENT SAMPLE ID     BOTTLE     COLLECTION     ANALYTICAL       2310675-001B     Influent 10-12-23     TEPLAR     Air     10/12/2023 2:20:00 PM     1 Natural Gas Analysis- CO2+O2	AMPLE         CLIENT SAMPLE ID TYPE         BOTTLE MATRIX         COLLECTION DATE         AMALYTICAL COMMENT           0675-0018         Influent 10-12-23         TEDLAR         An         INTLACAL COMMENT           0675-0018         Influent 10-12-23         TEDLAR         An         10/12/2023 22/00 PM         I Natural Gas Analysis- CO2+02         CO3 D1 3           0675-0018         Influent 10-12-23         TEDLAR         An         10/12/2023 22/00 PM         I Natural Gas Analysis- CO2+02         CO3 D1 3           0675-0018         Influent 10-12-23         TEDLAR         An         10/12/2023 22/00 PM         I Natural Gas Analysis- CO2+02         CO3 D1 3           0675-0018         Influent 10-12-23         TEDLAR         An         10/12/2023 22/00 PM         I Natural Gas Analysis- CO2+02         CO3 D1 3           0675-0018         Influent 10-12-23         Influent 10-12-23         TeDLAR         An         I Natural Gas Analysis- CO2+02         CO3 D1 3           0670-018         Influent 10-12-23         Influent 10-12-23         Influent 10-12-23         Model 10         Model 10         I Anult 20           0670-018         Influent 10-12-23         Influent 10-12-23         Influent 10-12-23         Model 10         Model 10         Model 10         Model 10         Model 10         Model 10	lgs reet	f	PHONE ACCOUNT #		(406) 252-6069
TEDLAR Air 10/12/2023 2:20:00 PM 1 Natural Gas Analysis- CO2+O2	Birlingtont 10-12-23     TEDLAR     Arr     10r1/2/02/3 2/20/00 PM     1 hatural Gas Analysis- CO2+O2     SCABI DI S	SAMPLE	C Repaired to the	COLLECTION	,	
	RUCTIONS / COMMENTS; ude 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. Date Time 8:15 AM Date Time 8:15 AM Received By Date Time Report TRANSMITTAL DESIRED: Time Time Time Report TRANSMITTAL DESIRED: Time Time Time Time Time Time Time Time	1 2310675-001B Influent 10-12-23	Air	10/12/2023 2:20:00 PM	1 Natural Gas Analysis- CO2+O2	S23101310
	Date     Time     8:15 AM     Received By     Date     Time     REPORT TRANSMITTAL DESIRED:       Date     Time     Date     Time     HARDCOPY (extra cost)     FAX     EMAIL	Please include the LAB ID and the CLIENT SAMPLE ID	) on all final reports. Please e-mail results to	) lab@hallenvironmer	ital.com. Please return all coolers and blue	: ice. Thank you.
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.	Date         Time         Received By:         Date         Time         FAX         EMAIL	Date: 10132023 Time:	Received By		REPORT TR	AANSMITTAL DESIRED:
: CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coole		Date	Received By:		HARDCOPY (extra cost)	

Attempt to Cool ?

Temp of samples

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2nd BD

Next BD

RUSH

Standard

TAT:

Comments:

FOR LAB USE ONLY

Client:	HILCORI										
Project:	Sunray B	B 1B									
Sample ID:	Sample ID: 2310675-001adup SampType: DUP			TestCode: EPA Method 8015D: Gasoline Range							
Client ID:	Influent 10-12-23	Batch	n ID: GA	100615	RunNo: 100615						
Prep Date: Analysis Date: 10		/20/2023	20/2023 SeqNo: 3688783			Units: µg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	1700	250						8.23	20	
Surr: BFB		140000		100000		137	15	412	0	0	

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

WO#: 2310675 02-Nov-23

HALL ENVIRONMENT/ ANALYSIS LABORATORY	AL.	TEI	L: 505-345-3	ntal Analysis Lab 4901 Haw Albuquerque. NA 975 FAX: 505-3- v.hallenvironmer	kins NE 1 87109 <b>Sañ</b> 45-4107	nple Log-In C	heck List
Client Name: HILCORP E	ENERGY	Work	Order Num	ber: 2310675		RcptNo:	1
Received By: Tracy Cas Completed By: Tracy Cas Reviewed By: 5CM		10/13/20	023 6:30:00 023 8:15:44				
Chain of Custody 1. Is Chain of Custody comp 2. How was the sample deliv				Yes 🗌 <u>Courier</u>	No 🔽	Not Present	
<u>Log In</u> 3. Was an attempt made to c	ool the sampl	es?		Yes	No 🗹	NA 🗌	
4. Were all samples received	at a temperal	ure of >0° C I	to 6.0°C	Yes 🗌	No 🗌	NA 🗹	
5. Sample(s) in proper contai	ner(s)?			Yes 🗹	No 🗌		
<ul><li>6. Sufficient sample volume f</li><li>7. Are samples (except VOA)</li></ul>			ed?	Yes ✔ Yes ✔	No 🗌		
8. Was preservative added to	bottles?			Yes 🗌	No 🗹	NA 🗌	
9. Received at least 1 vial with 10. Were any sample containe			'OA?	Yes 🗌 Yes 🗌	No 🗌 No 🗹	NA 🗹	
11. Does paperwork match bot (Note discrepancies on cha	ain of custody)			Yes 🗹	No 🗌	bottles checked for pH: (<2 or	>12 unless noted)
12. Are matrices correctly iden		•		Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses we 14. Were all holding times able (If no, patific austrmer for a	to be met?	<u> </u>		Yes ☑ Yes ☑	No 🗌 No 🗌	Checked by:	A 10-13-23
(If no, notify customer for a <u>Special Handling (if app</u>						C	
15. Was client notified of all di		vith this order?	•	Yes 🗌	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding:			Date Via:	eMail [	] Phone 🗍 Fax	In Person	
Client Instructions: 16. Additional remarks:	Mailing addre	ss.phone num	iber and En	nail/Fax are mis	sinq on COC- TM	C 10/13/23	
17. <u>Cooler Information</u> Cooler No Temp °C 1 N/A	Condition Good	Seal Intact Yes	Seal No	Seal Date	Signed By		

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Page 145 of 180			www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	+ *os ; ;	20 / Mi 2051MS 2051MS 204, 2 7 5 2 7 5 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	70 / DF 8/808/2 00 4.1) 5 01 4.2 5 5 7 4 7 7 8 7 9 7 9 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7	(GR 310 310 310 310 310 310 310 310 310 310	15D estid 1eth 3r, 1 AO/ AO/	BTEX / TPH:80 8081 Pd PAHs b RCRA b RCRA b R2R0 (9 8220 (9 10tal C (9 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2								Kemarks:		iossibility. Any sub-contracted data will be clearly notated on the analytical report.
	Turn-Around Time:	🗙 Standard 🛛 Rush	Project Name:	4	Project #:			Streat Hyde	Sampler: D. Burns	olers: 1	(including CF): N / A (°C)	Container Preservative HEAL No. Type and # Type	1	1						Via: COLUCI Date Time 30	Received by: Via: > Date Time	contracted to other accredited laboratories. This serves as notice of this
Received by OCD: 1/15/2024 4:03:58 PM	-Custody Record	Client: Alilcoro Energy CO	L'Il ough			Phone #:	Fax#:	QA/QC Package:	□ Az Compliance			Date Time Matrix Sample Name	23 14 20 Air Enfluent 10-12-23							Date: Time: Religquished by:	Date: Time: Relinquished by:	Released to Imaging: 4/9/2024 10:05:11 AM



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

November 15, 2023 Mitch Killough HILCORP ENERGY PO Box 4700 Farmington, NM 87499 TEL: (505) 564-0733 FAX:

RE: Sunray B1B

OrderNo.: 2311001

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 11/1/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B1B

2311001-001

**Project:** 

Lab ID:

**Analytical Report** Lab Order 2311001

Date Reported: 11/15/2023

## Hall Environmental Analysis Laboratory, Inc.

Matrix: AIR

Client Sample ID: Sunray B1B Influent Collection Date: 10/31/2023 3:30:00 PM

Received Date: 11/1/2023 6:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015D: GASOLINE RANGE					Analyst: KMN
Gasoline Range Organics (GRO)	900	250	µg/L	50	11/8/2023 2:56:00 PM
Surr: BFB	126	15-412	%Rec	50	11/8/2023 2:56:00 PM
EPA METHOD 8260B: VOLATILES					Analyst: RAA
Benzene	0.53	0.50	µg/L	5	11/8/2023 3:07:52 PM
Toluene	30	0.50	μg/L	5	11/8/2023 3:07:52 PM
Ethylbenzene	3.3	0.50	μg/L	5	11/8/2023 3:07:52 PM
Methyl tert-butyl ether (MTBE)	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,2,4-Trimethylbenzene	4.0	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,3,5-Trimethylbenzene	3.7	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,2-Dichloroethane (EDC)	ND	0.50	μg/L	5	11/8/2023 3:07:52 PM
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Naphthalene	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM
1-Methylnaphthalene	ND	2.0	µg/L	5	11/8/2023 3:07:52 PM
2-Methylnaphthalene	ND	2.0	µg/L	5	11/8/2023 3:07:52 PM
Acetone	ND	5.0	μg/L	5	11/8/2023 3:07:52 PM
Bromobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Bromodichloromethane	ND	0.50	μg/L	5	11/8/2023 3:07:52 PM
Bromoform	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Bromomethane	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM
2-Butanone	ND	5.0	µg/L	5	11/8/2023 3:07:52 PM
Carbon disulfide	ND	5.0	µg/L	5	11/8/2023 3:07:52 PM
Carbon tetrachloride	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Chlorobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Chloroethane	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM
Chloroform	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Chloromethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
2-Chlorotoluene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
4-Chlorotoluene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
cis-1,2-DCE	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
cis-1,3-Dichloropropene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM
Dibromochloromethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
Dibromomethane	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM
1,4-Dichlorobenzene	ND	0.50	μg/L	5	11/8/2023 3:07:52 PM
Dichlorodifluoromethane	ND	0.50	μg/L	5	11/8/2023 3:07:52 PM
1,1-Dichloroethane	ND	0.50	μg/L	5	11/8/2023 3:07:52 PM
1,1-Dichloroethene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

ND PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank в

Above Quantitation Range/Estimated Value Е

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit Page 1 of 5

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**CLIENT: HILCORP ENERGY** 

Sunray B1B

2311001-001

**Project:** 

Lab ID:

Analytical Report
Lab Order 2311001

Date Reported: 11/15/2023

Hall I	Environmental	Analysis	Laboratory,	Inc.

Client Sample ID: Sunray B1B Influent Collection Date: 10/31/2023 3:30:00 PM Received Date: 11/1/2023 6:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed			
EPA METHOD 8260B: VOLATILES					Analyst: RAA			
1,2-Dichloropropane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,3-Dichloropropane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
2,2-Dichloropropane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,1-Dichloropropene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Hexachlorobutadiene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
2-Hexanone	ND	5.0	µg/L	5	11/8/2023 3:07:52 PM			
Isopropylbenzene	0.70	0.50	µg/L	5	11/8/2023 3:07:52 PM			
4-Isopropyltoluene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
4-Methyl-2-pentanone	ND	5.0	µg/L	5	11/8/2023 3:07:52 PM			
Methylene chloride	ND	1.5	µg/L	5	11/8/2023 3:07:52 PM			
n-Butylbenzene	ND	1.5	µg/L	5	11/8/2023 3:07:52 PM			
n-Propylbenzene	0.64	0.50	µg/L	5	11/8/2023 3:07:52 PM			
sec-Butylbenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Styrene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
tert-Butylbenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Tetrachloroethene (PCE)	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
trans-1,2-DCE	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
trans-1,3-Dichloropropene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,2,3-Trichlorobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,2,4-Trichlorobenzene	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,1,1-Trichloroethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,1,2-Trichloroethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Trichloroethene (TCE)	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Trichlorofluoromethane	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
1,2,3-Trichloropropane	ND	1.0	µg/L	5	11/8/2023 3:07:52 PM			
Vinyl chloride	ND	0.50	µg/L	5	11/8/2023 3:07:52 PM			
Xylenes, Total	42	0.75	µg/L	5	11/8/2023 3:07:52 PM			
Surr: Dibromofluoromethane	80.0	70-130	%Rec	5	11/8/2023 3:07:52 PM			
Surr: 1,2-Dichloroethane-d4	91.0	70-130	%Rec	5	11/8/2023 3:07:52 PM			
Surr: Toluene-d8	114	70-130	%Rec	5	11/8/2023 3:07:52 PM			
Surr: 4-Bromofluorobenzene	109	70-130	%Rec	5	11/8/2023 3:07:52 PM			

Matrix: AIR

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

Qualifiers:

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

D Sample Diluted Due to MatrixH 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
- P Sample pH Not In Range RL Reporting Limit

Page 2 of 5

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## ANALYTICAL SUMMARY REPORT

November 06, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D			
Work Order: Project Name:	B23110156 G Not Indicated	Quote ID: B15626		
Energy Laborato	ories Inc Billings MT receive	ed the following 1 sample for Ha	ll Environmen	tal on 11/2/2023 for analysis.
Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B23110156-001	2311001-001B, Sunray B1B Influent	10/31/23 15:30 11/02/23	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:



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Hall Environmental
Project:	Not Indicated
Lab ID:	B23110156-001
Client Sample ID:	2311001-001B, Sunray B1B Influent

Report Date: 11/06/23 Collection Date: 10/31/23 15:30 DateReceived: 11/02/23 Matrix: Air

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.60	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Nitrogen	78.20	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Carbon Dioxide	0.17	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Hexanes plus	0.03	Mol %		0.01		GPA 2261-95	11/03/23 10:58 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
Hexanes plus	0.013	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
GPM Total	0.013	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
GPM Pentanes plus	0.013	gpm		0.001		GPA 2261-95	11/03/23 10:58 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	11/03/23 10:58 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	11/03/23 10:58 / jrj
Pseudo-critical Pressure, psia	545			1		GPA 2261-95	11/03/23 10:58 / jrj
Pseudo-critical Temperature, deg R	239			1		GPA 2261-95	11/03/23 10:58 / jrj
Specific Gravity @ 60/60F	0.999			0.001		D3588-81	11/03/23 10:58 / jrj
Air, % - The analysis was not corrected for air.	98.69			0.01		GPA 2261-95	11/03/23 10:58 / jrj

The analysis was not corrected for air.

### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

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

11/03/23 10:58 / jrj



Ethane

Propane

Isobutane

n-Butane

Isopentane

n-Pentane

Hexanes plus

6.01

5.12

1.99

1.99

1.04

1.02

0.79

Mol %

Billings, MT 406.252.6325 • Casper, WY 307.235.051.51 9f 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

## **QA/QC Summary Report**

Prepared by Billings, MT Branch

|--|--|

Client:	Hall Environmental				Work Order:	B2311	0156	Repo	rt Date:	11/06/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch	R411666
Lab ID:	B23110154-001ADUP	12 Sar	mple Duplic	ate			Run: GCNG	GA-B_231103A		11/03	/23 10:27
Oxygen			21.5	Mol %	0.01				0.0	20	
Nitrogen			78.1	Mol %	0.01				0	20	
Carbon I	Dioxide		0.35	Mol %	0.01				0.0	20	
Hydroge	n 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	
Isobutan	e		<0.01	Mol %	0.01					20	
n-Butane	)		<0.01	Mol %	0.01					20	
Isopenta	ne		<0.01	Mol %	0.01					20	
n-Pentar	1e		<0.01	Mol %	0.01					20	
Hexanes	plus		0.08	Mol %	0.01				13	20	
Lab ID:	LCS110323	11 Lat	oratory Co	ntrol Sample	e		Run: GCNG	GA-B_231103A		11/03	/23 12:38
Oxygen			0.61	Mol %	0.01	122	70	130			
Nitrogen			6.07	Mol %	0.01	101	70	130			
Carbon I	Dioxide		0.99	Mol %	0.01	100	70	130			
Methane			74.4	Mol %	0.01	99	70	130			

0.01

0.01

0.01

0.01

0.01

0.01

0.01

100

104

99

99

104

102

99

**Qualifiers:** RL - Analyte Reporting Limit 70

70

70

70

70

70

70

130

130

130

130

130

130

130

ENERGY ABORATORIES

Trust our People. Trust our Data. www.energylab.com Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# Work Order Receipt Checklist

## Hall Environmental

B231	10156	5
------	-------	---

Login completed by:	Danielle N. Harris		Date F	Received: 11/2/2023
Reviewed by:	gmccartney		Rec	eived by: lel
Reviewed Date:	11/3/2023		Carr	ier name: FedEx
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present
Custody seals intact on all se	ample bottles?	Yes	No 🗌	Not Present 🗸
Chain of custody present?		Yes 🗹	No 🗌	
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌	
Chain of custody agrees with	h sample labels?	Yes 🗹	No 🗌	
Samples in proper container	/bottle?	Yes 🗸	No 🗌	
Sample containers intact?		Yes 🗸	No 🗌	
Sufficient sample volume for	r indicated test?	Yes 🗹	No 🗌	
All samples received within h (Exclude analyses that are c such as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗹	No 🗌	
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable
Container/Temp Blank temp	erature:	11.0°C No Ice		
Containers requiring zero he bubble that is <6mm (1/4").	adspace have no headspace or	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

<ul> <li><b>Y RECORD</b> PAGE: 1 OF 1</li> <li><b>1</b> 10F 1</li> <li><b>1</b> 2001 Ilaykins NE 4901 Ilaykins NE 4901 Ilaykins NE 4901 Ilaykins NE 7109</li> <li><b>1</b> TEL: 505-345-3975</li> <li><b>1</b> TEL: 505-345-4107</li> <li><b>1</b> Website: www.hallenvironmental.com</li> <li><b>1 1 1 1 1 1 1 1 1 1</b></li></ul>	PHONE (406) 869-6253 FAX (406) 252-6069 ACCOUNT# EMAIL (406) 252-6069	COLLECTION DATE SAARIPTICAL COMMENTS 10/31/2023 3:30:00 PM 1 **5 DAY TAT** Natural Gas Analysis. CO2+02
CHAIN OF CUSTODY RECORD PAGE	Energy Laboratories	BOTTLE TYPE MATRIX TEDLAR Air
HALL ENVIRONMENTAL ANALYSIS LABORATORY	SUB CONTRATOR: Energy Labs - Billings COMPANY ADDRESS 1120 South 27th Street CITY, STATE. ZP Billings, MT 59107	ITEM     SAMPLE     CLIENT SAMPLE ID       1     2311001-001B     Sunray B1B Influent

Relinquished By	Date-11/1/2023	Time: 7:03 AM	Received By:	Date:	Time.	AL DESIRED:
Relinquished Bv	Date	Time.	Received By	Date	Time:	HARDCOPY (extra cost) FAX EMAIL. ONLINE
						EOP LARTISE ONLY
Relinquished By:	Date.	Time.	Receivedby Lehant	Diffe/2/23 Tom. OS.	Saino	TON LAND 035 CONL.1 Terms of semicles Col 3
TAT:	Standard	RUSH	Next BD 2nd BD	3rd BD		
						Comments:

### Received by OCD: 1/15/2024 4:03:58 PM

.

**Released to Imaging: 4/9/2024 10:05:11 AM** 

Client:	HILCOR	P ENERG	Y								
Project:	Sunray B	1B									
Sample ID:	2311001-001adup	Samp	Гуре: <b>DU</b>	IP	Tes	stCode: EF	A Method	8015D: Gasol	ine Range	•	
Client ID:	Sunray B1B Influe	nt Batc	h ID: <b>R1</b>	01035	F	RunNo: <b>10</b>	01035				
Prep Date:		Analysis [	Date: 11	/8/2023	Ş	SeqNo: 37	10509	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	850	250						5.96	20	
Surr: BFB		120000		100000		122	15	412	0	0	

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

WO#: 2311001 15-Nov-23

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	HILCORP ENERGY
Project:	Sunray B1B

Sample ID: 2311001-001a dup	SampT	ype: DU	P	Tes	TestCode: EPA Method 8260B: Volatiles						
Client ID: Sunray B1B Influe	nt Batch	n ID: <b>R1</b>	01045	F	RunNo: <b>10</b>	01045					
Prep Date:	Analysis D	Date: 11	/8/2023	S	SeqNo: 37	709412	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.49	0.25					-	8.22	20		
Toluene	29	0.50						5.27	20		
Ethylbenzene	3.0	0.50						8.33	20		
Methyl tert-butyl ether (MTBE)	ND	0.50						0	20		
1,2,4-Trimethylbenzene	3.7	0.50						9.31	20		
1,3,5-Trimethylbenzene	3.4	0.50						8.93	20		
1,2-Dichloroethane (EDC)	ND	0.50						0	20		
1,2-Dibromoethane (EDB)	ND	0.50						0	20		
Naphthalene	ND	1.0						0	20		
1-Methylnaphthalene	ND	2.0						0	20		
2-Methylnaphthalene	ND	2.0						0	20		
Acetone	ND	5.0						0	20		
Bromobenzene	ND	0.50						0	20		
Bromodichloromethane	ND	0.50						0	20		
Bromoform	ND	0.50						0	20		
Bromomethane	ND	1.0						0	20		
2-Butanone	ND	5.0						0	20		
Carbon disulfide	ND	5.0						0	20		
Carbon tetrachloride	ND	0.50						0	20		
Chlorobenzene	ND	0.50						0	20		
Chloroethane	ND	1.0						0	20		
Chloroform	ND	0.50						0	20		
Chloromethane	ND	0.50						0	20		
2-Chlorotoluene	ND	0.50						0	20		
4-Chlorotoluene	ND	0.50						0	20		
cis-1,2-DCE	ND	0.50						0	20		
cis-1,3-Dichloropropene	ND	0.50						0	20		
1,2-Dibromo-3-chloropropane	ND	1.0						0	20		
Dibromochloromethane	ND	0.50						0	20		
Dibromomethane	ND	1.0						0	20		
1,2-Dichlorobenzene	ND	0.50						0	20		
1,3-Dichlorobenzene	ND	0.50						0	20		
1,4-Dichlorobenzene	ND	0.50						0	20		
Dichlorodifluoromethane	ND	0.50						0	20		
1,1-Dichloroethane	ND	0.50						0	20		
1,1-Dichloroethene	ND	0.50						0	20		
1,2-Dichloropropane	ND	0.50						0	20		
1,3-Dichloropropane	ND	0.50						0	20		
2,2-Dichloropropane	ND	0.50						0	20		

\* 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

Page 4 of 5

WO#: 2311001

15-Nov-23

# **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

**Client:** 

**Project:** 

HILCORP ENERGY Sunray B1B

Sample ID: 2311001-001a dup	s SampT	ype: DU	P	TestCode: EPA Method 8260B: Volatiles								
Client ID: Sunray B1B Influe	ent Batch	n ID: R10	01045	F	RunNo: 10	01045						
Prep Date:	Analysis D	)ate: 11	/8/2023	S	SeqNo: 37	709412	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
1,1-Dichloropropene	ND	0.50						0	20			
Hexachlorobutadiene	ND	0.50						0	20			
2-Hexanone	ND	5.0						0	20			
Isopropylbenzene	0.65	0.50						8.36	20			
4-Isopropyltoluene	ND	0.50						0	20			
4-Methyl-2-pentanone	ND	5.0						0	20			
Methylene chloride	ND	1.5						0	20			
n-Butylbenzene	ND	1.5						0	20			
n-Propylbenzene	0.59	0.50						7.51	20			
sec-Butylbenzene	ND	0.50						0	20			
Styrene	ND	0.50						0	20			
tert-Butylbenzene	ND	0.50						0	20			
1,1,1,2-Tetrachloroethane	ND	0.50						0	20			
1,1,2,2-Tetrachloroethane	ND	0.50						0	20			
Tetrachloroethene (PCE)	ND	0.50						0	20			
trans-1,2-DCE	ND	0.50						0	20			
trans-1,3-Dichloropropene	ND	0.50						0	20			
1,2,3-Trichlorobenzene	ND	0.50						0	20			
1,2,4-Trichlorobenzene	ND	0.50						0	20			
1,1,1-Trichloroethane	ND	0.50						0	20			
1,1,2-Trichloroethane	ND	0.50						0	20			
Trichloroethene (TCE)	ND	0.50						0	20			
Trichlorofluoromethane	ND	0.50						0	20			
1,2,3-Trichloropropane	ND	1.0						0	20			
Vinyl chloride	ND	0.50						0	20			
Xylenes, Total	38	0.75						11.2	20			
Surr: Dibromofluoromethane	3.9		5.000		78.3	70	130	0	0			
Surr: 1,2-Dichloroethane-d4	4.6		5.000		91.7	70	130	0	0			
Surr: Toluene-d8	5.6		5.000		112	70	130	0	0			
Surr: 4-Bromofluorobenzene	5.4		5.000		108	70	130	0	0			

#### **Qualifiers:**

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

Р Sample pH Not In Range Page 5 of 5

WO#: 2311001

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albi TEL: 505-345-3975 Website: Website	4901 Haw uquerque, NM FAX: 505-3-	kins NE 187109 Sat 15-4107	nple Log-In Ch	eck List
Client Name: HILCORP ENERGY	Work Order Number	2311001		RcptNo: 1	
Received By: Tracy Casarrubias	11/1/2023 6:15:00 AM				
Completed By: Tracy Casarrubias Reviewed By: //・/・ころ	11/1/2023 6:56:16 AM				
<u>Chain of Custody</u>					
1. Is Chain of Custody complete?		Yes 🗌	No 🔽	Not Present	
2. How was the sample delivered?		<u>Courier</u>			
Log In 3. Was an attempt made to cool the sample	s?	Yes 🗌	No 🔽	NA 🗌	
4. Were all samples received at a temperatu	rre 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 tes	t(c)?	Yes 🔽	No 🗌		
7. Are samples (except VOA and ONG) prop		Yes 🗹			
8. Was preservative added to bottles?		Yes	No 🗹	NA 🗌	
9. Received at least 1 vial with headspace <	1/4" for AO VOA2	Yes	No 🗌	NA 🗹	
10. Were any sample containers received bro		Yes	No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	bottles checked for pH:	2 unless noted)
12. Are matrices correctly identified on Chain	of Custody?	Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌	14	cm 11/01/23
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	
<u>Special Handling (if applicable)</u>					
15. Was client notified of all discrepancies wi	th this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding:	Date:   Via: [	] eMail [	] Phone 门 Fax	In Person	
provide the state of the state	s,phone number, and Email	/Fax are mi	ssing on COC- T	MC 11/1/23	
16. Additional remarks:		i un uro ini			
17. <u>Cooler Information</u> Cooler No Temp <sup>o</sup> C Condition 1 N/A Good	Seal Intact Seal No S Yes	eal Date	Signed By		

Page 157 of 180

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		4901 Hawkins NE	Tel. 505-		10		1 2808/	səp	stici	108:H91 8081 Pe				 	 	 	arks: . 7 w v ev		
	Id Time:	Ject Name: Suntay B1B			E Shirt Hyde =	GNJOLM . TUN)			N/A (°C) MT	Preservative HEAL No.	100						Va: Date Time Remarks: Va: 10/31/52/406/70.52	Via: Counter Date Time	
	Turn-Around Time: 5 Clo & Standard	Project Name:	Project #:		Project Manage	shyde @	Sampler: On Ice	# of Coolers:	Cooler Temp(Including CF):	Container Type and #	2x tella						Received by:	Received by:	1
The second state and state and state and state	Chain-of-Custody Record Client: H. Icorp att. Mitch Killouch	e hilarp.com		Phone #:	email or Fax#:	QA/QC Package:	□ Az Compliance			Time Matrix Sample Name	Avent							Time: Relinquished by:	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

j, Ż Released to Imaging: 4/9/2024 10:05:11 AM

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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 04, 2023

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

RE: Sunray B1B

OrderNo.: 2311964

Dear Mitch Killough:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 11/17/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 2311964

Date Reported: 12/4/2023

Hall Environmental	Analysis	Laboratory.	Inc.
	1 11111 3 515	Laboratory	

Client Sample ID: Sunray B1B Influent **CLIENT:** HILCORP ENERGY **Project:** Sunray B1B Collection Date: 11/16/2023 2:20:00 PM Lab ID: 2311964-001 Matrix: AIR Received Date: 11/17/2023 6:15:00 AM Result **RL** Qual Units DF Analyses **Date Analyzed EPA METHOD 8260B: VOLATILES** Analyst: CCM Renzene 0.41 0.25 5 11/22/2023 1:09:00 PM µg/L Toluene 0.50 5 21 µg/L 11/22/2023 1:09:00 PM 5 Ethylbenzene 2.5 0.50 µg/L 11/22/2023 1:09:00 PM Methyl tert-butyl ether (MTBE) ND 0.50 µg/L 5 11/22/2023 1:09:00 PM 1,2,4-Trimethylbenzene 6.3 0.50 µg/L 5 11/22/2023 1:09:00 PM 1,3,5-Trimethylbenzene 5.5 0.50 5 11/22/2023 1:09:00 PM µg/L 5 1,2-Dichloroethane (EDC) ND 0.50 µg/L 11/22/2023 1:09:00 PM 11/22/2023 1:09:00 PM 1,2-Dibromoethane (EDB) ND 0.50 5 µg/L Naphthalene ND 10 µg/L 5 11/22/2023 1:09:00 PM 1-Methylnaphthalene ND 20 5 11/22/2023 1:09:00 PM µg/L 2-Methylnaphthalene ND 2.0 µg/L 5 11/22/2023 1:09:00 PM 5 Acetone ND 5.0 11/22/2023 1:09:00 PM µg/L 5 Bromobenzene ND 0.50 µg/L 11/22/2023 1:09:00 PM Bromodichloromethane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM Bromoform ND 0.50 5 11/22/2023 1:09:00 PM µg/L Bromomethane ND 1.0 µg/L 5 11/22/2023 1:09:00 PM 2-Butanone ND µg/L 5 5.0 11/22/2023 1:09:00 PM Carbon disulfide ND 5.0 5 11/22/2023 1:09:00 PM µg/L ND Carbon tetrachloride 0.50 µg/L 5 11/22/2023 1:09:00 PM Chlorobenzene ND 0.50 5 11/22/2023 1:09:00 PM µg/L Chloroethane ND 5 1.0 µg/L 11/22/2023 1:09:00 PM Chloroform ND 0.50 µg/L 5 11/22/2023 1:09:00 PM ND 5 Chloromethane 0.50 11/22/2023 1:09:00 PM µg/L 5 2-Chlorotoluene ND 0.50 µg/L 11/22/2023 1:09:00 PM ND 5 4-Chlorotoluene 0.50 µg/L 11/22/2023 1:09:00 PM µg/L cis-1,2-DCE ND 0.50 5 11/22/2023 1:09:00 PM cis-1,3-Dichloropropene ND 0.50 µg/L 5 11/22/2023 1:09:00 PM 1,2-Dibromo-3-chloropropane ND 1.0 µg/L 5 11/22/2023 1:09:00 PM Dibromochloromethane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM Dibromomethane ND 1.0 5 µg/L 11/22/2023 1:09:00 PM 1,2-Dichlorobenzene ND 0.50 5 µg/L 11/22/2023 1:09:00 PM 5 ND 1,3-Dichlorobenzene 0.50 11/22/2023 1:09:00 PM µg/L 5 1,4-Dichlorobenzene ND 0.50 µg/L 11/22/2023 1:09:00 PM Dichlorodifluoromethane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM 1,1-Dichloroethane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM 5 ND 1,1-Dichloroethene 0.50 µg/L 11/22/2023 1:09:00 PM µg/L ND 0.50 5 11/22/2023 1:09:00 PM 1,2-Dichloropropane 5 1,3-Dichloropropane ND 0.50 µg/L 11/22/2023 1:09:00 PM 2,2-Dichloropropane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level
 Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% 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 2311964

Date Reported: 12/4/2023

Hall Environ	mental Ana	lvsis Lab	oratory,	Inc.

Client Sample ID: Sunray B1B Influent **CLIENT:** HILCORP ENERGY **Project:** Sunray B1B Collection Date: 11/16/2023 2:20:00 PM Lab ID: 2311964-001 Matrix: AIR Received Date: 11/17/2023 6:15:00 AM Result **RL** Qual Units DF Analyses **Date Analyzed EPA METHOD 8260B: VOLATILES** Analyst: CCM ND 0.50 5 11/22/2023 1:09:00 PM 1,1-Dichloropropene µg/L Hexachlorobutadiene ND 0.50 5 µg/L 11/22/2023 1:09:00 PM 5 2-Hexanone ND 5.0 µg/L 11/22/2023 1:09:00 PM Isopropylbenzene 0.64 0.50 µg/L 5 11/22/2023 1:09:00 PM 4-Isopropyltoluene ND 0.50 µg/L 5 11/22/2023 1:09:00 PM 4-Methyl-2-pentanone ND 5.0 5 11/22/2023 1:09:00 PM µg/L 5 Methylene chloride ND 1.5 µg/L 11/22/2023 1:09:00 PM 11/22/2023 1:09:00 PM n-Butylbenzene ND 5 1.5 µg/L n-Propylbenzene 0.69 0.50 µg/L 5 11/22/2023 1:09:00 PM sec-Butylbenzene ND 0.50 5 11/22/2023 1:09:00 PM µg/L Styrene ND 0.50 µg/L 5 11/22/2023 1:09:00 PM tert-Butylbenzene ND 0.50 5 11/22/2023 1:09:00 PM µg/L 5 1,1,1,2-Tetrachloroethane ND 0.50 µg/L 11/22/2023 1:09:00 PM 1,1,2,2-Tetrachloroethane ND 0.50 µg/L 5 11/22/2023 1:09:00 PM Tetrachloroethene (PCE) ND 0.50 µg/L 5 11/22/2023 1:09:00 PM trans-1,2-DCE ND 0.50 µg/L 5 11/22/2023 1:09:00 PM ND 5 trans-1,3-Dichloropropene 0.50 µg/L 11/22/2023 1:09:00 PM 1,2,3-Trichlorobenzene ND 0.50 5 11/22/2023 1:09:00 PM µg/L ND 1,2,4-Trichlorobenzene 0.50 µg/L 5 11/22/2023 1:09:00 PM 1,1,1-Trichloroethane ND 0.50 5 11/22/2023 1:09:00 PM µg/L 1,1,2-Trichloroethane ND 5 0.50 µg/L 11/22/2023 1:09:00 PM Trichloroethene (TCE) ND 0.50 µg/L 5 11/22/2023 1:09:00 PM ND 5 Trichlorofluoromethane 0.50 11/22/2023 1:09:00 PM µg/L 5 1,2,3-Trichloropropane ND 1.0 µg/L 11/22/2023 1:09:00 PM Vinyl chloride ND 5 0.50 µg/L 11/22/2023 1:09:00 PM Xylenes, Total 35 0.75 µg/L 5 11/22/2023 1:09:00 PM Surr: Dibromofluoromethane 97.6 70-130 %Rec 5 11/22/2023 1:09:00 PM Surr: 1.2-Dichloroethane-d4 98.7 70-130 %Rec 5 11/22/2023 1:09:00 PM Surr: Toluene-d8 115 70-130 %Rec 5 11/22/2023 1:09:00 PM Surr: 4-Bromofluorobenzene 70-130 %Rec 5 11/22/2023 1:09:00 PM 116 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) 11/22/2023 1:09:00 PM 1100 25 µg/L 5 Surr: BFB 108 70-130 %Rec 5 11/22/2023 1:09:00 PM

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level Sample Diluted Due to Matrix

D н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated

Analyte detected in the associated Method Blank в

E Above Quantitation Range/Estimated Value J

Analyte detected below quantitation limits

- Р Sample pH Not In Range
- RL Reporting Limi



## ANALYTICAL SUMMARY REPORT

December 04, 2023

Hall Environmer 4901 Hawkins S Albuquerque, N	t NE Ste D			
Work Order: Project Name:	B23111613 C	Quote ID: B15626		
Energy Laborate	ories Inc Billings MT receive	ed the following 1 sample for Ha	II Environmen	tal on 11/21/2023 for analysis.
Lab ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
B23111613-001	2311964-001B, Sunray B1B Influent	11/16/23 14:20 11/21/23	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:



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Hall Environmental
Project:	Not Indicated
Lab ID:	B23111613-001
Client Sample ID:	2311964-001B, Sunray B1B Influent

Report Date: 12/04/23 Collection Date: 11/16/23 14:20 DateReceived: 11/21/23 Matrix: Air

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT						
Oxygen	21.61	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Nitrogen	78.06	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Carbon Dioxide	0.10	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Methane	0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Ethane	0.03	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
sobutane	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
sopentane	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
-Pentane	<0.01	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
lexanes plus	0.19	Mol %		0.01		GPA 2261-95	12/01/23 11:49 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
sobutane	< 0.001	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
sopentane	< 0.001	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
-Pentane	< 0.001	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
lexanes plus	0.080	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
SPM Total	0.080	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
GPM Pentanes plus	0.080	gpm		0.001		GPA 2261-95	12/01/23 11:49 / jrj
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	10			1		GPA 2261-95	12/01/23 11:49 / jrj
let BTU per cu ft @ std cond. (LHV)	9			1		GPA 2261-95	12/01/23 11:49 / jrj
seudo-critical Pressure, psia	545			1		GPA 2261-95	12/01/23 11:49 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	12/01/23 11:49 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	12/01/23 11:49 / jrj
Air, % - The analysis was not corrected for air.	98.74			0.01		GPA 2261-95	12/01/23 11:49 / jrj

- The analysis was not corrected for air.

### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 12/01/23 11:49 / jrj



Billings, MT 406.252.6325 • Casper, WY 307925.0515 f 180 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# **QA/QC Summary Report**

Prepared by Billings, MT Branch

Work Order: B23111613

|--|

Report Date: 12/04/23

onent.						DZUTT	010	Керо	Ti Dulo	12/04/20	
Analyte		Count	Result	Units	RL	%REC I	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch	R41304
Lab ID:	B23111612-001ADUP	12 Sar	mple Duplic	ate		F	Run: GC78	90_231201A		12/01	/23 10:57
Oxygen			21.5	Mol %	0.01				0.2	20	
Nitrogen			78.2	Mol %	0.01				0	20	
Carbon D	Dioxide		0.20	Mol %	0.01				14	20	
Hydroger	n 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	e		<0.01	Mol %	0.01					20	
n-Butane	)		<0.01	Mol %	0.01					20	
Isopentar	ne		<0.01	Mol %	0.01					20	
n-Pentan	e		<0.01	Mol %	0.01					20	
Hexanes	plus		0.17	Mol %	0.01				5.7	20	
Lab ID:	LCS120123	11 Lat	oratory Co	ntrol Sample		F	Run: GC78	90_231201A		12/01	/23 04:00
Oxygen			0.52	Mol %	0.01	104	70	130			
Nitrogen			7.02	Mol %	0.01	117	70	130			
Carbon D	Dioxide		1.01	Mol %	0.01	102	70	130			
Methane			73.7	Mol %	0.01	99	70	130			
Ethane			5.99	Mol %	0.01	100	70	130			
Propane			5.02	Mol %	0.01	102	70	130			
Isobutane	e		1.85	Mol %	0.01	92	70	130			
n-Butane	)		2.02	Mol %	0.01	101	70	130			
Isopentar	ne		1.03	Mol %	0.01	103	70	130			
n-Pentan	e		1.04	Mol %	0.01	104	70	130			
Hexanes	plus		0.83	Mol %	0.01	104	70	130			

ENERG ABORATORIES

Trust our People. Trust our Data. www.energylab.com Billings, MT 406.252.6325 • Casper, WY 307.235.0515 Gillette, WY 307.686.7175 • Helena, MT 406.442.0711

# Work Order Receipt Checklist

# Hall Environmental

Login completed by:	Danielle N. Harris		Date Received: 11/21/2023				
Reviewed by:	lleprowse		Received by: lel				
Reviewed Date:	11/27/2023		Carr	ier name: FedEx			
Shipping container/cooler in	good condition?	Yes 🗸	No 🗌	Not Present			
Custody seals intact on all sl	hipping container(s)/cooler(s)?	Yes 🖌	No 🗌	Not Present			
Custody seals intact on all sa	ample bottles?	Yes	No 🗌	Not Present 🗹			
Chain of custody present?		Yes 🗹	No 🗌				
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌				
Chain of custody agrees with	n 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 h (Exclude analyses that are c such as pH, DO, Res Cl, Su	onsidered field parameters	Yes 🗹	No 🗌				
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable			
Container/Temp Blank tempe	erature:	16.2°C No Ice					
Containers requiring zero he bubble that is <6mm (1/4").	adspace have no headspace or	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

Received by OCD: 1/15/2024 4:03:58 PM

Please include the LAB	3 ID and the CLIENT	r sample id	) on all final reports. Please e-mail res	ults to lab@hallenvir	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: 11/17/2023	Time <sup>-</sup> 11:46 AM	Received By:	Date: Time:	ORT TRANSMITTAL
Relinquished By:	Date	Time.	Received By:	Date: Time:	L HARDCOPY (extra cost) FAX EMAIL ONLINE
Relinquished By:	Date:	Time	Received By L' Lehand	Lehane offerlas Bry: 25	FOR LAB USE ONLY Tenno of samples C Attemnet to Cod 9
TAT:	Disting	RUSH	H Next BD 2nd BD	3rd BD	
					Comments

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Environment Testin		ntral. LLC wkins NE Sañ NM 87109 -345-4107	nple Log-In Check List
Client Name: HILCORP ENERGY Wo	ork Order Number: 2311964	4	RcptNo: 1
Received By: Tracy Casarrubias 11/17	7/2023 6:15:00 AM		
Completed By: Tracy Casarrubias 11/17	7/2023 11:42:24 AM		
_	1/73		
Chain of Custody			
1. Is Chain of Custody complete?	Yes	No 🗹	Not Present
2. How was the sample delivered?	Courier		
<u>Log In</u> 3. Was an attempt made to cool the samples?	Yes	No 🗹	
4. Were all samples received at a temperature of $>0^{\circ}$		- No-M-	W 11/1/23
5. Sample(s) in proper container(s)?	Yes Ves	required No	
6. Sufficient sample volume for indicated test(s)?	Yes 🔽	No 🗌	
7. Are samples (except VOA and ONG) properly prese	erved? Yes 🗹	No 🗌	
8. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗌
9. Received at least 1 vial with headspace <1/4" for A	Q VOA? Yes 🗌	No 🗌	
10. Were any sample containers received broken?	Yes 🗆	No 🗹	
			# of preserved bottles checked
11. Does paperwork match bottle labels?	Yes 🔽	No 🗌	for pH: (<2 or >12 unless noted)
(Note discrepancies on chain of custody) 12. Are matrices correctly identified on Chain of Custoc	ly? Yes 🗹	No 🗌	Adjusted?
13. Is it clear what analyses were requested?	Yes 🗹		
14. Were all holding times able to be met?	Yes 🗹	No 🗌	Checked by SCM 11770
(If no, notify customer for authorization.)			
Special Handling (if applicable)			
15. Was client notified of all discrepancies with this ord	der? Yes	] No 🗍	NA 🗹
Person Notified:	Date:		
By Whom:	Via: CeMail	Phone Fax	In Person
Regarding:			
Client Instructions: Mailing address. phone	number, and Email/Fax are	missing on COC- T	MC 11/17/23
16. Additional remarks:			· · ·
17. <u>Cooler Information</u>			
Cooler No Temp °C Condition Seal Inte	act Seal No Seal Date	Signed By	
1 N/A Good Yes			

Date: Time: Relinguished by: 1/16/33 IS20 Relinquished by: Date: Time: Relinquished by: 1/16/33 IS20 Relinquished by: 1/16/34 Relinquished by: 1/16/35 Relinquished by: 1/16/3		Phone #: email or Fax#: QA/QC Package: Standard	Idin-of-Custody Record
Time: Relinquished by: Date Time Time: Relinquished by: Via: Date Time Time: Relinquished by: Via: Calliner Date Time Time: Relinquished by: Via: Calliner Date Time Nov All 11/12/15/20 Nov All 11/12/15/20 Nov All 11/12/15/20 Via: Calliner Date Time Via: Calliner Date Time		n.com Myer Myer	Turn-Around Time: Standard I Rush Project Name: Sun Vary IS IS Project #:
Remarks: $CC$ ; Z. $MY erc @ en.solution . Count S DUMS of this possibility. Any sub-contracted data will be clearly notated on the analytical report. Md 85: E0: F FC0C/SI/T : CO in the analytical report.$	 TPH:8015           8081 Pes           EDB (Me           PAHs by           RCRA 8           Cl, F, Br           8260 (VC           8270 (Se	$PO_4, PO_4, SO_4$ $PO_4, SO$	HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request

•

Released to Imaging: 4/9/2024 10:05:11 AM

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 ecolers and blue ice. Thank you.
Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Flease retuint an course and processes and proce



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 12, 2023

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

RE: Sunray B1B

OrderNo.: 2311D07

Dear Stuart Hyde:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 11/29/2023 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**CLIENT: HILCORP ENERGY** 

Sunray B1B

**Project:** 

**Analytical Report** Lab Order 2311D07

Date Reported: 12/12/2023

## Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: Sunray B1B Influent Collection Date: 11/28/2023 2:20:00 PM Received Date: 11/29/2023 6:30:00 AM

Lab ID: 2311D07-001	Matrix: AIR	R	<b>Received Date:</b> 11/29/2023 6:30:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed			
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst: JJP			
Gasoline Range Organics (GRO)	750	25		µg/L	5	12/7/2023 1:07:12 PM			
Surr: BFB	516	15-412	S	%Rec	5	12/7/2023 1:07:12 PM			
EPA METHOD 8260B: VOLATILES						Analyst: CCN			
Benzene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Toluene	13	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Ethylbenzene	1.7	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Methyl tert-butyl ether (MTBE)	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
1,2,4-Trimethylbenzene	4.0	0.50		μg/L	5	12/6/2023 3:21:00 PM			
1,3,5-Trimethylbenzene	3.6	0.50		μg/L	5	12/6/2023 3:21:00 PM			
1,2-Dichloroethane (EDC)	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
1,2-Dibromoethane (EDB)	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Naphthalene	ND	1.0		μg/L	5	12/6/2023 3:21:00 PM			
1-Methylnaphthalene	ND	2.0		μg/L	5	12/6/2023 3:21:00 PM			
2-Methylnaphthalene	ND	2.0		μg/L	5	12/6/2023 3:21:00 PM			
Acetone	ND	5.0		μg/L	5	12/6/2023 3:21:00 PM			
Bromobenzene	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Bromodichloromethane	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Bromoform	ND	0.50		μg/L	5	12/6/2023 3:21:00 PM			
Bromomethane	ND	1.0		µg/L	5	12/6/2023 3:21:00 PM			
2-Butanone	ND	5.0		µg/L	5	12/6/2023 3:21:00 PM			
Carbon disulfide	ND	5.0		µg/L	5	12/6/2023 3:21:00 PM			
Carbon tetrachloride	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Chlorobenzene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Chloroethane	ND	1.0		µg/L	5	12/6/2023 3:21:00 PM			
Chloroform	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Chloromethane	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
2-Chlorotoluene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
4-Chlorotoluene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
cis-1,2-DCE	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
cis-1,3-Dichloropropene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
1,2-Dibromo-3-chloropropane	ND	1.0		µg/L	5	12/6/2023 3:21:00 PM			
Dibromochloromethane	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Dibromomethane	ND	1.0		µg/L	5	12/6/2023 3:21:00 PM			
1,2-Dichlorobenzene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
1,3-Dichlorobenzene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
1,4-Dichlorobenzene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
Dichlorodifluoromethane	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
1,1-Dichloroethane	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			
1,1-Dichloroethene	ND	0.50		µg/L	5	12/6/2023 3:21:00 PM			

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated. S

Analyte detected in the associated Method Blank в

Е Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit Page 1 of 2

\*

**CLIENT: HILCORP ENERGY** 

Sunray B1B

2311D07-001

**Project:** 

Lab ID:

Analytical Report
Lab Order 2311D07

Date Reported: 12/12/2023

## Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: Sunray B1B Influent Collection Date: 11/28/2023 2:20:00 PM Received Date: 11/29/2023 6:30:00 AM

Lab ID. 2511D07-001		Received Date: 11/29/2025 0.50.00 AM						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed			
EPA METHOD 8260B: VOLATILES					Analyst: CCM			
1,2-Dichloropropane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,3-Dichloropropane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
2,2-Dichloropropane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,1-Dichloropropene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Hexachlorobutadiene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
2-Hexanone	ND	5.0	µg/L	5	12/6/2023 3:21:00 PM			
Isopropylbenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
4-Isopropyltoluene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
4-Methyl-2-pentanone	ND	5.0	µg/L	5	12/6/2023 3:21:00 PM			
Methylene chloride	ND	1.5	µg/L	5	12/6/2023 3:21:00 PM			
n-Butylbenzene	ND	1.5	µg/L	5	12/6/2023 3:21:00 PM			
n-Propylbenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
sec-Butylbenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Styrene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
tert-Butylbenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Tetrachloroethene (PCE)	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
trans-1,2-DCE	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
trans-1,3-Dichloropropene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,2,3-Trichlorobenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,2,4-Trichlorobenzene	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,1,1-Trichloroethane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,1,2-Trichloroethane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Trichloroethene (TCE)	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Trichlorofluoromethane	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
1,2,3-Trichloropropane	ND	1.0	µg/L	5	12/6/2023 3:21:00 PM			
Vinyl chloride	ND	0.50	µg/L	5	12/6/2023 3:21:00 PM			
Xylenes, Total	22	0.75	µg/L	5	12/6/2023 3:21:00 PM			
Surr: Dibromofluoromethane	100	70-130	%Rec	5	12/6/2023 3:21:00 PM			
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	5	12/6/2023 3:21:00 PM			
Surr: Toluene-d8	116	70-130	%Rec	5	12/6/2023 3:21:00 PM			
Surr: 4-Bromofluorobenzene	112	70-130	%Rec	5	12/6/2023 3:21:00 PM			

Matrix: AIR

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

**Qualifiers:** 

Value exceeds Maximum Contaminant Level. 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

Page 2 of 2

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## ANALYTICAL SUMMARY REPORT

December 08, 2023

Hall Environmer 4901 Hawkins S Albuquerque, Ni	t NE Ste D			
Work Order: Project Name:	B23112063 ( Not Indicated	Quote ID: B15626		
Energy Laborato	ories Inc Billings MT receiv	ed the following 1 sample for H	all Environmen	tal on 11/30/2023 for analysis.
Lab ID	Client Sample ID	Collect Date Receive Dat	e Matrix	Test
B23112063-001	2311D07-001B, Sunray B1B Influent	/ 11/28/23 14:20 11/30/23	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:



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Hall Environmental
Project:	Not Indicated
Lab ID:	B23112063-001
Client Sample ID:	2311D07-001B, Sunray B1B Influent

Report Date: 12/08/23 Collection Date: 11/28/23 14:20 DateReceived: 11/30/23 Matrix: Air

				MCL/	
Analyses	Result U	Inits Qualifier	s RL	QCL Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS	REPORT				
Oxygen	21.64 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Nitrogen	78.25 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Carbon Dioxide	0.10 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Hydrogen Sulfide	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Methane	0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Ethane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Propane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Isobutane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
n-Butane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Isopentane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
n-Pentane	<0.01 N	lol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Hexanes plus	<0.01 N	1ol %	0.01	GPA 2261-95	12/06/23 12:33 / jrj
Propane	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
Isobutane	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
n-Butane	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
Isopentane	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
n-Pentane	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
Hexanes plus	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
GPM Total	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
GPM Pentanes plus	< 0.001 g	pm	0.001	GPA 2261-95	12/06/23 12:33 / jrj
CALCULATED PROPERTIES					
Gross BTU per cu ft @ Std Cond. (HHV)	ND		1	GPA 2261-95	12/06/23 12:33 / jrj
Net BTU per cu ft @ std cond. (LHV)	ND		1	GPA 2261-95	
Pseudo-critical Pressure, psia	545		1	GPA 2261-95	12/06/23 12:33 / jrj
Pseudo-critical Temperature, deg R	239		1	GPA 2261-95	12/06/23 12:33 / jrj
Specific Gravity @ 60/60F	0.998		0.001	D3588-81	12/06/23 12:33 / jrj
Air, % - The analysis was not corrected for air.	98.87		0.01	GPA 2261-95	12/06/23 12:33 / jrj

- The analysis was not corrected for air.

### COMMENTS

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.

- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.

- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.

- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit 12/06/23 12:33 / jrj



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# **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client:	Hall Environmental				Work Order:	B2311	2063	Repor	rt Date:	12/08/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	GPA 2261-95									Batch:	R413302
Lab ID:	B23120241-001ADUP	12 San	nple Duplic	ate			Run: GCNG	GA-B_231206A		12/06/	23 04:07
Oxygen			21.4	Mol %	0.01				0	20	
Nitrogen			78.0	Mol %	0.01				0.0	20	
Carbon D	Dioxide		0.42	Mol %	0.01				0.0	20	
Hydroger	n 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	e		<0.01	Mol %	0.01					20	
n-Butane			<0.01	Mol %	0.01					20	
Isopentar	ne		<0.01	Mol %	0.01					20	
n-Pentan	e		<0.01	Mol %	0.01					20	
Hexanes	plus		0.11	Mol %	0.01				9.5	20	
Lab ID:	LCS120623	11 Lab	oratory Co	ntrol Sample	1		Run: GCNG	A-B_231206A		12/06/	23 03:15
Oxygen			0.52	Mol %	0.01	104	70	130			
Nitrogen			6.39	Mol %	0.01	106	70	130			
Carbon D	Dioxide		0.99	Mol %	0.01	100	70	130			
Methane			74.6	Mol %	0.01	100	70	130			
Ethane			6.03	Mol %	0.01	100	70	130			
Propane			5.07	Mol %	0.01	103	70	130			
Isobutane	e		1.76	Mol %	0.01	88	70	130			
n-Butane			1.97	Mol %	0.01	98	70	130			
Isopentar	ne		0.98	Mol %	0.01	98	70	130			
n-Pentan	e		0.96	Mol %	0.01	96	70	130			
Hexanes	plus		0.74	Mol %	0.01	93	70	130			

B23112063

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# Work Order Receipt Checklist

# Hall Environmental

Login completed by:	Yvonna E. Smith	Date Received: 11/30/2023					
Reviewed by:	Icadreau		R	eceived by: dnh			
Reviewed Date:	12/5/2023		Ca	arrier name: FedEx			
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present			
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🗹	No 🗌	Not Present			
Custody seals intact on all s	ample bottles?	Yes	No 🗌	Not Present 🗹			
Chain of custody present?		Yes 🗹	No 🗌				
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌				
Chain of custody agrees wit	h sample labels?	Yes 🗹	No 🗌				
Samples in proper container	r/bottle?	Yes 🗹	No 🗌				
Sample containers intact?		Yes 🗹	No 🗌				
Sufficient sample volume fo	r indicated test?	Yes 🗹	No 🗌				
All samples received within (Exclude analyses that are c such as pH, DO, Res Cl, Si	considered field parameters	Yes 🗹	No 🗌				
Temp Blank received in all s	shipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable			
Container/Temp Blank temp	erature:	11.6°C No Ice					
Containers requiring zero he bubble that is <6mm (1/4").	eadspace have no headspace or	Yes	No 🗌	No VOA vials submitted			
Water - pH acceptable upor	n 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 South Central, LLC 4901 Havkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com	(406) 252-6069	IMENTS	823112003
Eurofins Environment Te ~ Website: www	FAX (406) 2 EMAIL	ANALYTICAL COMMENTS	
<b>2D</b> PAGE:   OF:	PHONE: (406) 869-6253 ACCOUNT #:-	COLLECTION DATE	11/28/2023 2:20:00 PM 1 Natural gas analysis. CO2+O2
CHAIN OF CUSTODY RECORD PAGE	oratories <sup>PI</sup>	BOTTLE COLLE TYPE MATRIX DA	TEDLAR Air 11/28/2023.
CHAIN OF	COMPANY: Energy Lab		
1S Environment Testing	SUB CONTRATOR         Energy Labs - Billings           ADDRESS         1120 South 27th Street           CITY, STATE, ZIP         Billings, MT 59107	SAMPLE CLIENT SAMPLE ID	2311D07-001B Sunray B1B Influent
🂒 eurofins	SUB CONTRATO ADDRESS CITY, STATE, ZIP	ITEM SAN	1 2311D0

Received By:     Date:     Time:     REPORT TRANSMITTAL DESIRED:       Received By:     Date:     Time:     EAAIL       Next BD     2nd BD     3rd BD     Temp of samples       Next BD     2nd BD     Comments     Comments	7.22 AM     Received By.     Date.     Time.     REPORT TRANS)       Received By.     Date.     Time.     HARDCOPY (extra cost)     EA       Received By.     Date.     Time.     HARDCOPY (extra cost)     EA       Received By.     Date.     Time.     HARDCOPY (extra cost)     EA       RUSI     Next BD     2nd BD     3rd BD     Comments     Comments	Received By     Date     Time     REPORT TRANS       Received By     Date     Time     HARDCOPY (extra cost)     FAN       Received By     Date     Time     FAN     FOR LAB t       Received By     Date     Time     FOR LAB t     FOR LAB t       Next BD     2nd BD     3rd BD     Gomments     Comments
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		1/29/2023 Time: Time Time

SPECIAL INSTRUCTIONS / COMMENTS:

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🛟 eurofins En	vironment Testin	Alb. TEL: 505-345-3975	nment Testing South Central. LL 4901 Hawkins N. uquerque. NM 8710 FAX: 505-345-410 illenvironmental.com	5 5 9 7	mple Log-In (	Check List
Client Name: HILCORP I	ENERGY	Work Order Number	2311D07		RcptNo	p: 1
Received By: Tracy Cas	arrubias	1/29/2023 6:30:00 AI	<b>v</b> i			
Completed By: Tracy Cas	arrubias	1/29/2023 7:19:09 A	N			
Reviewed By: Jun	29/23					
Chain of Custody						
1. Is Chain of Custody comp	lete?		Yes 🗌	No 🔽	Not Present	
2. How was the sample delive	vered?		Courier			
Log In 3. Was an attempt made to o	cool the samples?		Yes	No 🔽	NA 🗌	
4. Were all samples received	I at a temperature of	>0° C to 6.0°C	r Yes 🗌	No 🗌	NA 🗹	
5. Sample(s) in proper conta	iner(s)?		Yes 🖌	No 🗌		
6. Sufficient sample volume t	for indicated test(s)?		Yes 🗹	No 🗌		
7. Are samples (except VOA	and ONG) properly p	preserved?	Yes 🗹	No 🗌		
8. Was preservative added to	bottles?		Yes 🗌	No 🗹	NA 🗌	
9. Received at least 1 vial will	th headspace <1/4" f	or AQ VOA?	Yes	No 🗌	NA 🗹	
10. Were any sample contain	ers received broken?		Yes	No 🔽		
11. Does paperwork match bo (Note discrepancies on ch			Yes 🗹	No 🗌	# of preserved bottles checked for pH: (<2	or >12 unless noted)
12. Are matrices correctly ider	•	istodv?	Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses w			Yes 🗹	No 🗌		
14. Were all holding times able (If no, notify customer for a			Yes 🗹	No 🗌	Checked by	scm 11/27/12
Special Handling (if ap	olicable)					
15. Was client notified of all d	liscrepancies with thi	s order?	Yes 🗌	No 🗌	) NA 🗹	
Person Notified:		Date:	9. <b>9</b>	100 ST 100070 TO	ar	
By Whom:	ļ	Via: [	eMail Pho	ne 🔲 Fa	ax 📋 In Person	
Regarding:		11. Y 4. State State (1999)	Calculation in game many street			
Client Instructions:	Mailing address.pho	one number and Email	/Fax are missing o	n COC-	FMC 11/29/23	
16. Additional remarks:						
17. <u>Cooler Information</u> Cooler No Temp °C 1 NA	Condition Sea Good Yes	I Intact Seal No	Seal Date S	gned By	-	

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Turn-Around Time:	Standard D Rush		SUNVAY B18	Project #: /		Project Manager: Stuart Hyde	nsolum.com	Sampler: Zach Wyer On Inc. The Mo	blers:	(Including CF): N/A (°C)	Container Preservative HEAL No. Type and # Type 7311D07							Repeatived by: Via: Date Time F	Received by: Via: COUNER Date Time 12:30
Chain-of-Custody Record	Client: Hiltoro che: Mitch Killouch	mkillouchehilcereron	Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	□ Az Con			Date Time Matrix Sample Name	Influent						Date: Time: Relinquished by: <sup>1/38/32</sup>   Sl O	Date: Time: Relipevished by: Received by: Via: COUNER Date Time

Released to Imaging: 4/9/2024 10:05:11 AM

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 303718

CONDITIONS Operator: OGRID: HILCORP ENERGY COMPANY 372171 1111 Travis Street Action Number: Houston, TX 77002 303718 Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

#### CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the Fourth Quarter 2023SVE System Update for Sunray B 1B: Content Satisfactory 1. Continue to perform O&M as scheduled and install pitot tubes as necessary. Please include field and installation notes when completed for next report to OCD. 2. Operate system as normal. 3. Submit next system update report to OCD as Hilcorp has scheduled.	4/9/2024