1. Continue with report's Plan for Next Quarter of operation.
2. Submit next quarterly report by July 31, 2023.

REVIEWED
By Nelson Velez at 2:09 pm, May 05, 2023

ENSOLUM

April 27, 2023

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

Subject: **2023 First Quarter – Solar SVE System Update**
Trunk S
Harvest Four Corners, LLC
Incident Number NCS1931842879
Remediation Permit Number 3RP-1014
Rio Arriba County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Harvest Four Corners, LLC (Harvest), presents the following *2023 First Quarter – Solar SVE System Update* report summarizing the soil vapor extraction (SVE) system performance at the Trunk S (Site), located in Unit I of Section 7, Township 25 North, Range 03 West, in Rio Arriba County, New Mexico (Figure 1).

BACKGROUND

The solar SVE system was installed in late 2019, with full time system operation beginning on July 16, 2020, to remediate subsurface impacts following a release on June 25, 2019. The release occurred at the Harvest Trunk S natural gas pipeline located in Rio Arriba County, New Mexico (Figure 1) and consisted of ≥25 barrels (bbls) of condensate and 278.5 MCF of natural gas sourced from a subsurface pipeline leak. Harvest reported the release to the New Mexico Oil Conservation Division (NMOCD) on a release Notification and Corrective Action Form C-141 on September 20, 2019, and the event was assigned Incident Number NCS1931842879. Approximately 2,000 cubic yards (yd^3) of impacted soil were excavated and transported off site for disposal. Due to the extent of the release, the excavation was unsuccessful at removing all impacted soils and the excavation was backfilled with the stockpiled soils after repairing the pipeline leak. A solar SVE system was installed to remediate remaining impacts resulting from the release. Reports summarizing remediation system operation for the previous quarters of system operation have been submitted to the NMOCD.

SOLAR SVE SYSTEM OPERATION AND MONITORING

The solar SVE system is comprised of five SVE wells (SB-1 through SB-5) and a VariSun Mobile Solar SVE unit consisting of a 4.6 horsepower vacuum blower capable of extracting 190 cubic feet per minute (cfm) at 50 inches of water column (IWC) vacuum. Each SVE well has a dedicated leg with an adjustable valve and vacuum gauge to control the individual flow rates and vacuum prior to manifolding together before the liquid knockout tank and blower. Harvest utilized a solar-powered SVE system due to the remote location and the lack of electrical grid power at the site. The direct-drive blower motor is connected to the solar panels via a motor controller that automatically starts the system as sunlight is available and throttles the blower up as sun power increases throughout the day to maximize efficiency. Seasonally, there are approximately 10 hours in the winter and 12 hours in the summer of available solar power in Farmington, New Mexico. The complete solar SVE system is constructed as one unit designed for utilization at off-

grid locations and operates autonomously. The layout of the solar SVE system is depicted on Figure 2.

Between full time startup of the solar SVE system on July 16, 2020, and the last quarterly site visit on March 15, 2023, there have been 973 days of operation, with an estimated 11,104 total hours of nominal daylight available for solar SVE system operations. Since installation, the system had an actual runtime of 11,693 hours, for an overall uptime of 105.3 percent (%) of the available runtime hours based on the average available nominal daylight hours (National Renewable Energy Laboratory (NREL)). Due to a faulty hour meter, actual runtime hours during the first quarter of 2023 are based on NREL average available nominal daylight hours. Based on prior quarterly runtime data consistently achieving greater than 100% overall uptime, Ensolum made the assumption that at a minimum, quarterly operational runtime and available runtime are equivalent. The hour meter will be repaired/replaced in the following quarter. A photographic log of the runtime hours meter reading from before the meter malfunctioned in December 2022 is included as Appendix A. Below is a table showing SVE system runtime in comparison with nominal available daylight hours per month.

Time Period	Start up July 16, 2020 to December 7, 2022	December 8, 2022, to December 31, 2022	January 1, 2023, to January 31, 2023	February 1, 2023, to February 28, 2023	March 1, 2023, to March 15, 2023
Days	875	24	31	28	15
Avg. Nominal Daylight Hours	11.58	9	10	10	11
Available Runtime Hours	10,133	216	310	280	165

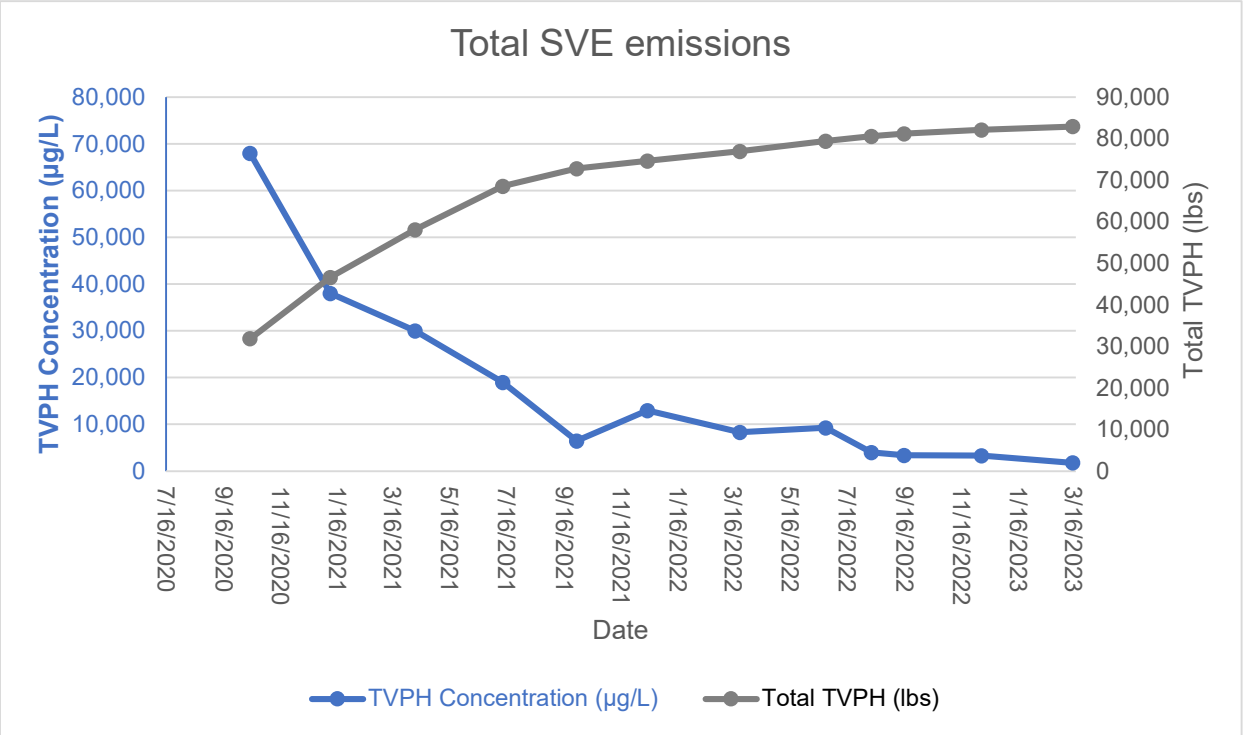
Total Available Daylight Runtime Hours	**11,104**
Actual Runtime Hours*	**11,693**
Cumulative % Runtime	**105.3%**
Quarterly Available Daylight Runtime Hours	**971**
Quarterly Runtime Hours*	**971**
Quarterly % Runtime	**100.0%**

* 2023 Q1 actual runtime hours based on average nominal daylight hours availabe
Source: National Renewable Energy Laboratory (NREL)

AIR EMISSIONS MONITORING

An initial air sample was collected on July 16, 2020, from the influent side of the blower on the SVE system. Subsequent air samples were collected quarterly with the most recent sample collected on March 15, 2023 (Table 1). Samples were collected in 1-liter Tedlar® bags via a high vacuum air sampler and submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analyses of volatile organic compounds (VOCs) using United States Environmental Protection Agency (EPA) Method 8260B, total volatile petroleum hydrocarbons (TVPH) using EPA Method 8015, and oxygen and carbon dioxide by Gas Processors Association Method 2261. The laboratory analytical report from the March 2023 vapor sampling event is included as Appendix B.

Estimated air emissions were calculated using air sample data collected to-date (Table 2). The impacted mass source removal via the solar SVE system to-date is estimated to be 82,503 pounds (lbs) of TVPH. Since system startup petroleum hydrocarbon emissions have steadily declined as shown in the chart below.



Despite the expected decrease in the mass removal rate over time, observed in the March 2023 TVPH emissions rate decreasing to approximately 0.38 pounds per hour (lb/hr) or approximately 3.80 pounds per day (lb/day), the SVE system is still effectively remediating the Site.

PLAN FOR NEXT QUARTER OF OPERATION

During the upcoming second quarter 2023 operations, Ensolum will continue to visit the Site monthly to ensure a minimum of 90% runtime efficiency continues and that any maintenance issues are addressed in a timely manner. An air sample will be collected in the second quarter and analyzed for VOCs using EPA Method 8260B, TVPH using EPA Method 8015, and oxygen and carbon dioxide by Gas Processors Association Method 2261. An updated quarterly report with sample results, runtime, and mass source removal will be submitted under separate cover.

Quarterly air sampling and reporting will continue until the mass removal rate declines to an asymptotic level and indicates that hydrocarbon impacts have been reduced at the Site to the maximum extent practicable. At that time, Ensolum will conduct additional soil sampling to investigate potential residual impacts and request closure if concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX) and TVPH are below the applicable standards defined in the New Mexico Administrative Code (NMAC) 19.15.29.12.

If the final delineation samples indicate hydrocarbon impact has been reduced to below NMAC 19.15.29.12 Table 1 Closure Criteria, Ensolum will present the confirmation laboratory analysis data in a report and request closure of the release. Should the results indicate that analytes in the soil exceed the Table 1 Closure Criteria, Ensolum will either make operational adjustments and restart the SVE system based on the results of the investigation or develop an alternative remedial approach to reach Site closure.

Ensolum appreciates the opportunity to provide this report to the NMOCD. If you have any questions or comments regarding this update, do not hesitate to contact Danny Burns at (303)

601-1420 or via email at dburns@ensolum.com or Monica Smith at (505) 632-4625 or at msmith@harvestmidstream.com.

Sincerely,

ENSOLUM, LLC

Reece Hanson
Staff Geologist

Danny Burns
Senior Geologist

APPENDICES

Figure 1 – Site Location Map
Figure 2 – SVE System Layout
Table 1 – Soil Vapor Extraction System Laboratory Analytical Results
Table 2 – Soil Vapor Extraction System Mass Removal and Emissions
Appendix A – Photographic Log
Appendix B – Laboratory Analytical Report

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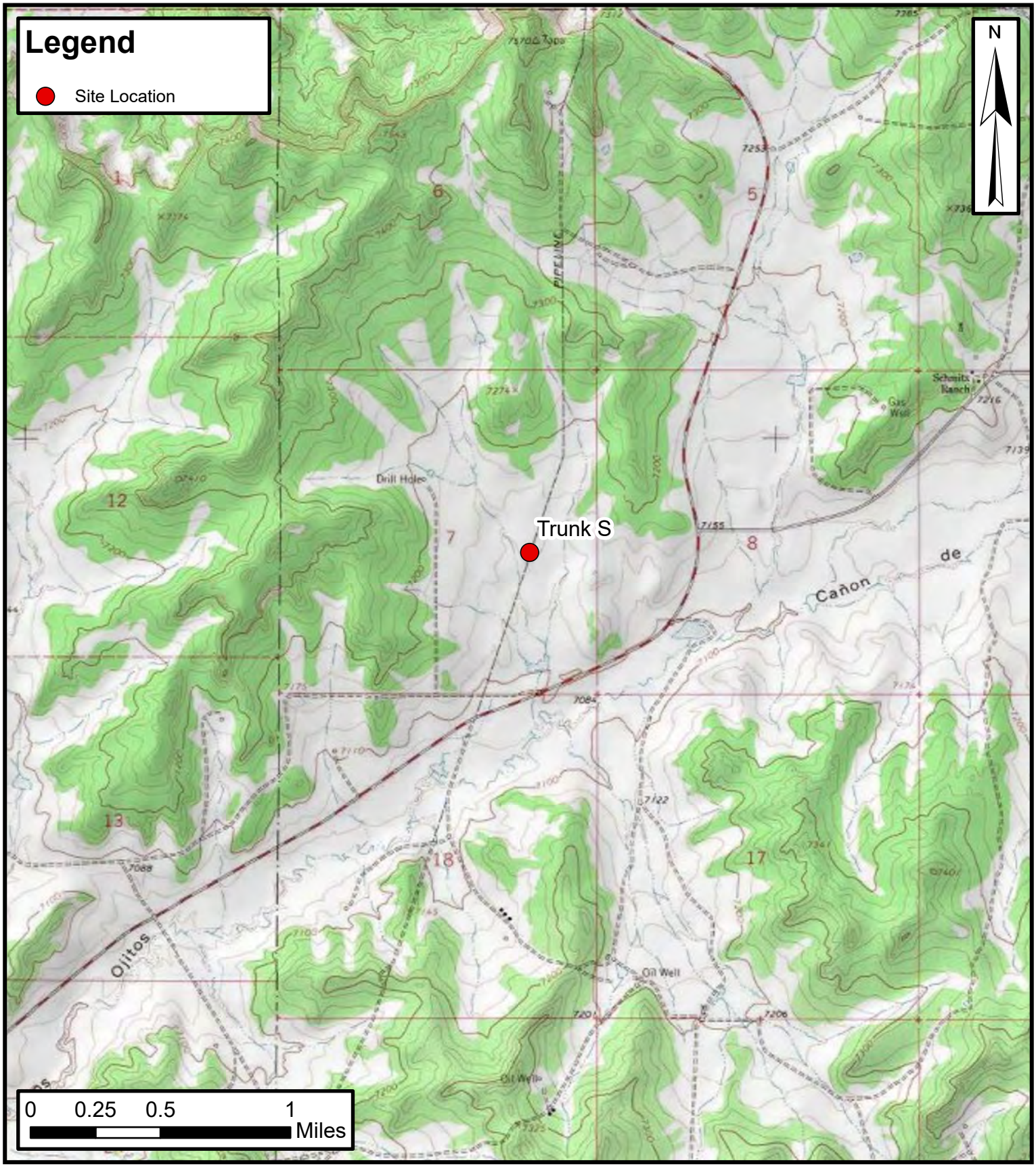
Figures



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Environmental, Engineering and Hydrogeologic Consultants

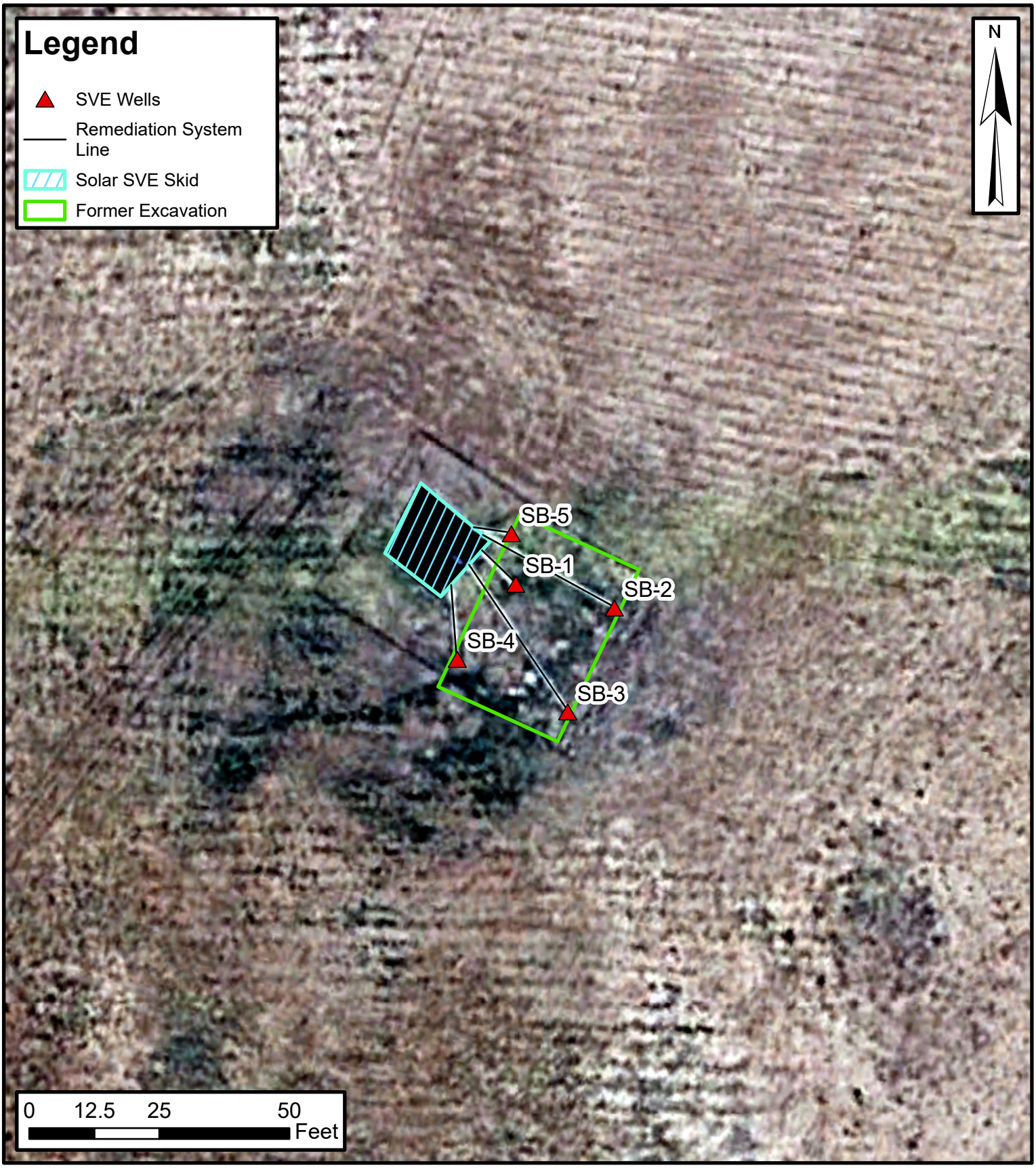
Site Location Map

Trunk S
Harvest Four Corners, LLC

36.41189°, -107.18085°
Rio Arriba County, New Mexico

FIGURE
1

Sources: Environmental Systems Research Institute (ESRI), National Geographic society, i-cubed



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Environmental, Engineering and Hydrogeologic Consultants

SVE System Layout

Trunk S
Harvest Four Corners, LLC
36.41189°, -107.18085°
Rio Arriba County, New Mexico

FIGURE
2

Sources: Google Earth

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Tables

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TABLE 1
SOIL VAPOR EXTRACTION SYSTEM LABORATORY ANALYTICAL RESULTS
Trunk S
Harvest Four Corners, LLC
Rio Arriba County, New Mexico

System Analytical Results

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH/GRO (µg/L)	Oxygen (Mol %)	Carbon Dioxide (Mol %)
7/16/2020*	4,268	1,700	1,570	29.4	517.9	NA	20.20	0.67
9/3/2020*	1,100	45	220	22	230	NA	NA	NA
9/30/2020*	1,200	49	480	86	770	NA	NA	NA
10/14/2020*	1,357	150	460	15	270	68,000	20.94	0.93
1/8/2021*	786	76	310	9.1	150	38,000	20.81	0.88
4/9/2021*	898	50	160	8.2	140	30,000	21.54	0.49
7/12/2021*	859	33	150	12	210	19,000	21.47	0.49
9/29/2020*	561	15	77	5.3	85	6,500	21.57	0.54
12/14/2021*	NM	22	140	10	170	13,000	21.83	0.40
3/23/2022*	545	17	90	7.9	130	8,300	21.95	0.35
6/23/2022	605	6.5	42	3.5	49	9,300	21.39	0.45
8/11/2022	789	6.4	48	5.5	78	4,000	NA	NA
9/15/2022	487	5.7	37	4.6	59	3,400	20.91	0.66
12/7/2022	457	3.8	38	5.2	67	3,300	21.35	0.63
3/15/2023	370	2.7	24	2.4	32	1,800	21.34	0.53

Notes:

* - data collected by Animas Environmental
GRO: gasoline range organics
µg/L: micrograms per liter
Mol'%: mole percent
NM: not measured
NA: not analyzed
PID: photoionization detector
ppm: parts per million
TVPH: total volatile petroleum hydrocarbons

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Trunk S
Harvest Four Corners, LLC
Rio Arriba County, New Mexico

Laboratory Analysis

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
7/16/2020	4,268	1,700	1,570	29.4	517.9	NS
9/3/2020	1,100	45	220	22	230	NS
9/30/2020	1,200	49	480	86	770	NS
10/14/2020	1,357	150	460	15	270	68,000
1/8/2021	786	76	310	9.1	150	38,000
4/9/2021	898	50	160	8.2	140	30,000
7/12/2021	859	33	150	12	210	19,000
9/29/2021	561	15	77	5.3	85	6,500
12/14/2021	553	22	140	10	170	13,000
3/23/2022	545	17	90	7.9	130	8,300
6/23/2022	605	6.5	42	3.5	49	9,300
8/11/2022	789	6.4	48	5.5	78	4,000
9/15/2022	487	5.7	37	4.6	59	3,400
12/7/2022	457	3.8	38	5.2	67	3,300
3/15/2023	370	2.7	24	2.4	32	1,800
Average	989	145	256	15	197	17,050

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Trunk S
Harvest Four Corners, LLC
Rio Arriba County, New Mexico

Average Vapor Extraction Summary

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
7/16/2020	88	1,700,160	1,700,160	0.56	0.52	0.010	0.17	--
9/3/2020	86	5,007,720	3,307,560	0.28	0.29	0.008	0.12	--
9/30/2020	87	6,756,420	1,748,700	0.02	0.11	0.018	0.16	--
10/14/2020	86	7,540,740	784,320	0.03	0.15	0.016	0.17	22.00
1/8/2021	94	12,193,740	4,653,000	0.04	0.14	0.004	0.07	17.84
4/9/2021	92	17,553,660	5,359,920	0.02	0.08	0.003	0.05	11.83
7/12/2021	85	24,127,560	6,573,900	0.01	0.05	0.003	0.06	8.11
9/29/2021	92	29,730,360	5,602,800	0.01	0.04	0.003	0.05	4.22
12/14/2021	42	31,650,600	1,920,240	0.00	0.02	0.001	0.02	2.44
3/23/2022	74	36,077,280	4,426,680	0.01	0.03	0.002	0.04	2.31
6/23/2022	47.6	39,581,592	3,504,312	0.00	0.01	0.001	0.02	2.00
8/11/2022	93	43,331,352	3,749,760	0.00	0.02	0.002	0.02	1.75
9/15/2022	97	45,892,152	2,560,800	0.00	0.02	0.002	0.02	1.31
12/7/2022	44	48,584,952	2,692,800	0.00	0.01	0.001	0.01	0.88
3/15/2023	36	50,798,952	2,214,000	0.00	0.00	0.001	0.01	0.38
			Average	0.07	0.10	0.00	0.07	6.26

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
Trunk S
Harvest Four Corners, LLC
Rio Arriba County, New Mexico

Flow and Laboratory Analysis

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
7/16/2020	322	322	180	166	3	55	--	--
9/3/2020	963	641	180	185	5	77	--	--
9/30/2020	1,298	335	5	38	6	55	--	--
10/14/2020	1,450	152	5	23	2	25	31,899	15.9
1/8/2021	2,275	825	33	112	3	61	14,718	7.4
4/9/2021	3,246	971	21	79	3	48	11,483	5.7
7/12/2021	4,535	1,289	17	64	4	72	10,453	5.2
9/29/2021	5,550	1,015	8	40	3	52	4,284	2.1
12/14/2021	6,312	762	2	13	1	15	1,862	0.9
3/23/2022	7,309	997	5	32	2	41	2,303	1.2
6/23/2022	8,536	1,227	3	14	1	20	2,455	1.2
8/11/2022	9,208	672	2	11	1	15	1,175	0.6
9/15/2022	9,648	440	1	7	1	11	578	0.3
12/7/2022	10,668	1,020	1	6	1	11	901	0.5
3/15/2023	11,693	1,025	0	4	1	7	391	0.2
Total Mass Recovery to Date			463	792	38	564	82,503	41

Notes:

cf: cubic feet

cfm: cubic feet per minute

µg/L: micrograms per liter

lb/hr: pounds per hour

--: not sampled

PID: photoionization detector

ppm: parts per million

TVPH: total volatile petroleum hydrocarbons

VOC : volatile organic compounds

*VOC Mass Removed (lbs) = Influent VOCs (mg/m^3) * Air Flow Rates (cfm) * (1 m^3/35.3147 ft^3) * (1 lb/453,592 mg) * Time Period (min)*

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APPENDIX A

Photographic Log

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Environmental, Engineering and Hydrogeologic Consultants

Photographic Log
Trunk S Tank Battery
Harvest Four Corners, LLC
Rio Arriba County, New Mexico

Photo #1
SVE Hours Reading 12-7-2022

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APPENDIX B

Laboratory Analytical Report

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 27, 2023

Danny Burns

Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX:

RE: Trunk S OrderNo.: 2303837

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2303837**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Influent
Project: Trunk S
Collection Date: 3/15/2023 12:45:00 PM
Lab ID: 2303837-001 **Matrix:** AIR **Received Date:** 3/16/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	1800	50		µg/L	10	3/16/2023 4:58:00 PM	G95327
Surr: BFB	98.8	70-130		%Rec	10	3/16/2023 4:58:00 PM	G95327
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	2.7	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Toluene	24	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Ethylbenzene	2.4	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2,4-Trimethylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,3,5-Trimethylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Naphthalene	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1-Methylnaphthalene	ND	4.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
2-Methylnaphthalene	ND	4.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Acetone	ND	10		µg/L	10	3/16/2023 4:58:00 PM	R95327
Bromobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Bromodichloromethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Bromoform	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Bromomethane	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
2-Butanone	ND	10		µg/L	10	3/16/2023 4:58:00 PM	R95327
Carbon disulfide	ND	10		µg/L	10	3/16/2023 4:58:00 PM	R95327
Carbon tetrachloride	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Chlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Chloroethane	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Chloroform	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Chloromethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
2-Chlorotoluene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
4-Chlorotoluene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
cis-1,2-DCE	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
cis-1,3-Dichloropropene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Dibromochloromethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Dibromomethane	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2-Dichlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,3-Dichlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,4-Dichlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Dichlorodifluoromethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1-Dichloroethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1-Dichloroethene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327

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

Qualifiers:

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

Analytical Report
Lab Order **2303837**
Date Reported: **3/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Influent
Project: Trunk S
Collection Date: 3/15/2023 12:45:00 PM
Lab ID: 2303837-001 **Matrix:** AIR **Received Date:** 3/16/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,2-Dichloropropane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,3-Dichloropropane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
2,2-Dichloropropane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1-Dichloropropene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Hexachlorobutadiene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
2-Hexanone	ND	10		µg/L	10	3/16/2023 4:58:00 PM	R95327
Isopropylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
4-Isopropyltoluene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
4-Methyl-2-pentanone	ND	10		µg/L	10	3/16/2023 4:58:00 PM	R95327
Methylene chloride	ND	3.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
n-Butylbenzene	ND	3.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
n-Propylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
sec-Butylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Styrene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
tert-Butylbenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Tetrachloroethene (PCE)	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
trans-1,2-DCE	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
trans-1,3-Dichloropropene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2,3-Trichlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2,4-Trichlorobenzene	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1,1-Trichloroethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,1,2-Trichloroethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Trichloroethene (TCE)	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Trichlorofluoromethane	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
1,2,3-Trichloropropane	ND	2.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Vinyl chloride	ND	1.0		µg/L	10	3/16/2023 4:58:00 PM	R95327
Xylenes, Total	32	1.5		µg/L	10	3/16/2023 4:58:00 PM	R95327
Surr: Dibromofluoromethane	90.4	70-130		%Rec	10	3/16/2023 4:58:00 PM	R95327
Surr: 1,2-Dichloroethane-d4	81.1	70-130		%Rec	10	3/16/2023 4:58:00 PM	R95327
Surr: Toluene-d8	112	70-130		%Rec	10	3/16/2023 4:58:00 PM	R95327
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	10	3/16/2023 4:58:00 PM	R95327

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

Qualifiers:

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

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ANALYTICAL SUMMARY REPORT

March 24, 2023

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

Work Order: B23031222 Quote ID: B15626

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 3/17/2023 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B23031222-001	2303837-001B, Influent	03/15/23 12:45	03/17/23	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:

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: B23031222-001
Client Sample ID: 2303837-001B, Influent

Report Date: 03/24/23
Collection Date: 03/15/23 12:45
DateReceived: 03/17/23
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
GAS CHROMATOGRAPHY ANALYSIS REPORT							
Oxygen	21.34	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Nitrogen	77.92	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Carbon Dioxide	0.53	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Methane	0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Ethane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Propane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Hexanes plus	0.20	Mol %		0.01		GPA 2261-95	03/20/23 08:23 / ikc
Propane	< 0.001	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
Hexanes plus	0.084	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
GPM Total	0.084	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
GPM Pentanes plus	0.084	gpm		0.001		GPA 2261-95	03/20/23 08:23 / ikc
CALCULATED PROPERTIES							
Gross BTU per cu ft @ Std Cond. (HHV)	10			1		GPA 2261-95	03/20/23 08:23 / ikc
Net BTU per cu ft @ std cond. (LHV)	9			1		GPA 2261-95	03/20/23 08:23 / ikc
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	03/20/23 08:23 / ikc
Pseudo-critical Temperature, deg R	241			1		GPA 2261-95	03/20/23 08:23 / ikc
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	03/20/23 08:23 / ikc
Air, %	97.50			0.01		GPA 2261-95	03/20/23 08:23 / ikc
- The analysis was not corrected for air.							
COMMENTS							
-						-	03/20/23 08:23 / ikc

- BTU, GPM, and specific gravity are corrected for deviation from ideal gas behavior.
- GPM = gallons of liquid at standard conditions per 1000 cu. ft. of moisture free gas @ standard conditions.
- To convert BTU to a water-saturated basis @ standard conditions, multiply by 0.9825.
- Standard conditions: 60 F & 14.73 psi on a dry basis.

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental **Work Order:** B23031222 **Report Date:** 03/24/23

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **GPA 2261-95**										Batch: R399140
Lab ID: **B23031222-001ADUP**	12	Sample Duplicate				Run: GCNGA-B_230320A				03/20/23 09:19
Oxygen		21.3	Mol %	0.01				0.0	20	
Nitrogen		77.9	Mol %	0.01				0	20	
Carbon Dioxide		0.53	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		0.20	Mol %	0.01				0.0	20	
Lab ID: **LCS032023**	11	Laboratory Control Sample				Run: GCNGA-B_230320A				03/20/23 10:21
Oxygen		0.64	Mol %	0.01	128	70	130			
Nitrogen		6.10	Mol %	0.01	102	70	130			
Carbon Dioxide		1.01	Mol %	0.01	102	70	130			
Methane		74.1	Mol %	0.01	99	70	130			
Ethane		6.13	Mol %	0.01	102	70	130			
Propane		5.10	Mol %	0.01	103	70	130			
Isobutane		2.03	Mol %	0.01	101	70	130			
n-Butane		2.02	Mol %	0.01	101	70	130			
Isopentane		1.03	Mol %	0.01	103	70	130			
n-Pentane		1.03	Mol %	0.01	103	70	130			
Hexanes plus		0.80	Mol %	0.01	100	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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Work Order Receipt Checklist

Hall Environmental

B23031222

Login completed by: Yvonna E. Smith
Date Received: 3/17/2023
Reviewed by: tedwards
Received by: nvh
Reviewed Date: 3/20/2023
Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	9.0°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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2303837-001B	Influent	TEDLAR	Air	3/15/2023 12:45:00 PM	1	Fixed Gases O2, CO2 *RUSH 5 DAY TAT* B23031222

SPECIAL INSTRUCTIONS / COMMENTS:

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

Relinquished By:	Date: 3/16/2023	Time: 8:39 AM	Received By:	Date: 3-17-23	Time: 0935
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Harvest | Work Order Number: 2303837 | RcptNo: 1

Received By: Sean Livingston 3/16/2023 8:00:00 AM
Completed By: Sean Livingston 3/16/2023 8:37:24 AM
Reviewed By: DAD 3/16/23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JK 3-16-23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present	Morty		

Chain-of-Custody Record

Client: Harvest Midstream

Attn: Monica Smith

Mailing Address:

Phone #:

email or Fax#: msmith@harvestmidstream.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush 5-day

Project Name: Trunk S

Project #:

Project Manager: Danny Burns dburns@enssolutions.com

Sampler: Reece Hanson

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp(Including CF): 1.4 - 0.1 = 1.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2303837	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Full VOC's 8260	Fixed Gas O_2, CO_2
3/15/23	1245	Air	Influent	2, Tedlar	—	001		X									X	X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/15/23	1530				3/15/23	1530
3/15/23	1756	Christian Ward		Courier	3/16/23	8:00

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 211700

CONDITIONS

Operator:	OGRID:
Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	373888
	Action Number: 211700
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	1. Continue with report's Plan for Next Quarter of operation. 2. Submit next quarterly report by July 31, 2023.	5/5/2023