



# ENSOLUM

April 26, 2024

## **New Mexico Oil Conservation Division**

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

**Subject: 2024 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 *2024 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 from an underground natural gas pipeline leak associated with the Site and consisted of more than 25 barrels (bbls) of condensate and 278.5 thousand cubic feet (MCF) of natural gas. 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<sup>3</sup>) 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 soil and the excavation was backfilled with the stockpiled soils after repairing the pipeline leak. A solar SVE system was installed to remediate residual impacts resulting from the release. Reports summarizing remediation system operation for 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), installed at depths ranging from 30 to 50 feet below ground surface (bgs), plumbed to 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 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 28, 2024, there have been 1,352 days of operation, with an estimated 15,519 total hours of nominal daylight available for solar SVE system operations. Since installation, the system had an actual runtime of 15,946 hours, for an overall uptime of 102.7 percent (%) of the available runtime hours based on the average available nominal daylight hours (per the National Renewable Energy Laboratory (NREL)). A photographic log of the runtime hours meter readings is included as Appendix A. Below is a table summarizing SVE system runtime in comparison with nominal available daylight hours per month.

**SVE System Runtime**

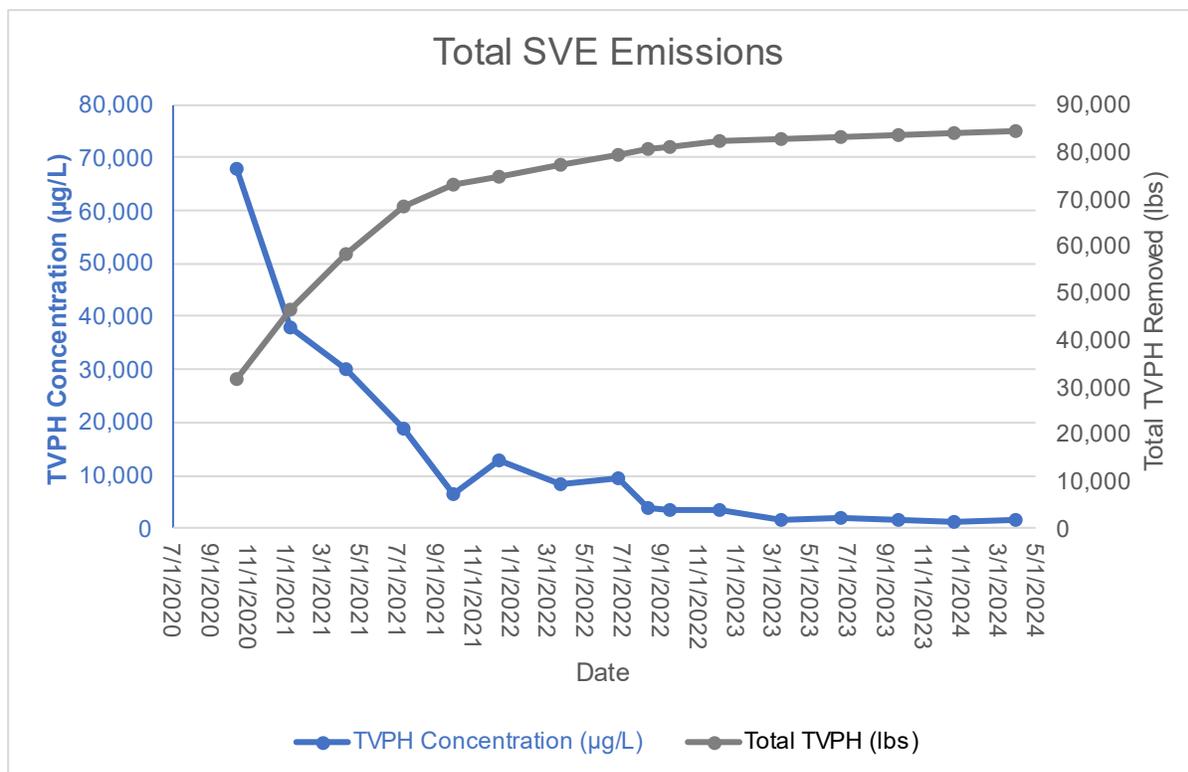
Time Period	Start up July 16, 2020 to December 21, 2023	December 22, 2023 To Decmeber 31, 2023	January 1, 2024 to January 31, 2024	February 1, 2024 to February 29, 2024	March 1, 2024 to March 28,2024
Days	1,254	10	31	29	28
Avg. Nominal Daylight Hours	11.58	9	10	10	11
Available Runtime Hours	14,521	90	310	290	308

<b>Total Available Daylight Runtime Hours</b>	<b>15,519</b>
<b>Actual Runtime Hours</b>	<b>15,946</b>
<b>Cumulative % Runtime</b>	<b>102.7%</b>
<b>Quarterly Available Daylight Runtime Hours</b>	<b>998</b>
<b>Quarterly Runtime Hours</b>	<b>1,002</b>
<b>Quarterly % Runtime</b>	<b>100.4%</b>

**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 28, 2024 (Table 1). Samples were collected in 1-liter Tedlar® bags via a high vacuum air sampler and submitted to Eurofins Environmental Testing Laboratory (Eurofins) in Albuquerque, New Mexico, for analyses of volatile organic compounds (VOCs) following United States Environmental Protection Agency (EPA) Method 8260B, total volatile petroleum hydrocarbons (TVPH) following EPA Method 8015, and oxygen and carbon dioxide following Gas Processors Association Method 2261. The laboratory analytical report from the March 2024 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 84,364 pounds (lbs) (or 42.18 tons) of TVPH. Since system startup, petroleum hydrocarbon emissions have steadily declined as shown in the chart below.



**Notes:**

TVPH – total volatile petroleum hydrocarbons  
 µg/L – micrograms per liter  
 lbs – pounds

The mass removal rate has steadily decreased over time. The March 2024 TVPH emissions rate remained approximately the same as the December 2023 rate of approximately 0.45 pounds per hour (lbs/hr) or approximately 4.50 pounds per day (lbs/day).

**CLOSURE PLAN**

The proposed Site Closure Plan outlined in the report titled “2023 Fourth Quarter – Solar SVE System Update” was reviewed and approved by the NMOCD on April 17, 2024. Ensolum plans to drill two boreholes to 55 feet below ground surface (bgs) at the locations approved in the closure plan shown on Figure 2. Per the NMOCD’s conditions of approval, Ensolum will collect soil samples every 5 feet beginning at the surface. Soil samples will be submitted to Eurofins and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), Total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) and chloride (Cl) per Table I Closure Criteria.

**SITE CLOSURE CRITERIA**

In accordance with the *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 NMAC), the following Closure Criteria for constituents of concern (COCs) has been applied to the Site:

- Benzene: 10 milligrams per kilogram (mg/kg)
- BTEX: 50 mg/kg
- TPH: 100 mg/kg
- Chloride: 600 mg/kg



If the closure soil samples indicate hydrocarbon impacts have been reduced to concentrations in compliance with Site specific Table I Closure Criteria, Ensolum will present the confirmation laboratory analysis data in a report and request closure of the release. Should the results indicate analytes in the soil exceed the Table I Closure Criteria, Ensolum will either make operational adjustments and restart the SVE system or develop an alternative remedial approach to reach Site closure based on the results of the investigation.

Until the drilling and sampling activities approved in the closure plan can take place, Ensolum will continue quarterly sampling for VOCs, TVPH, and oxygen and carbon dioxide, and will continue quarterly reporting associated with each sampling event. In addition, 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.

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 Brooke Herb at (970) 403-6824 or via email at [bherb@ensolum.com](mailto:bherb@ensolum.com) or Monica Smith at (505) 632-4625 or at [msmith@harvestmidstream.com](mailto:msmith@harvestmidstream.com).

Sincerely,

**ENSOLUM, LLC**



Reece Hanson  
Project Geologist



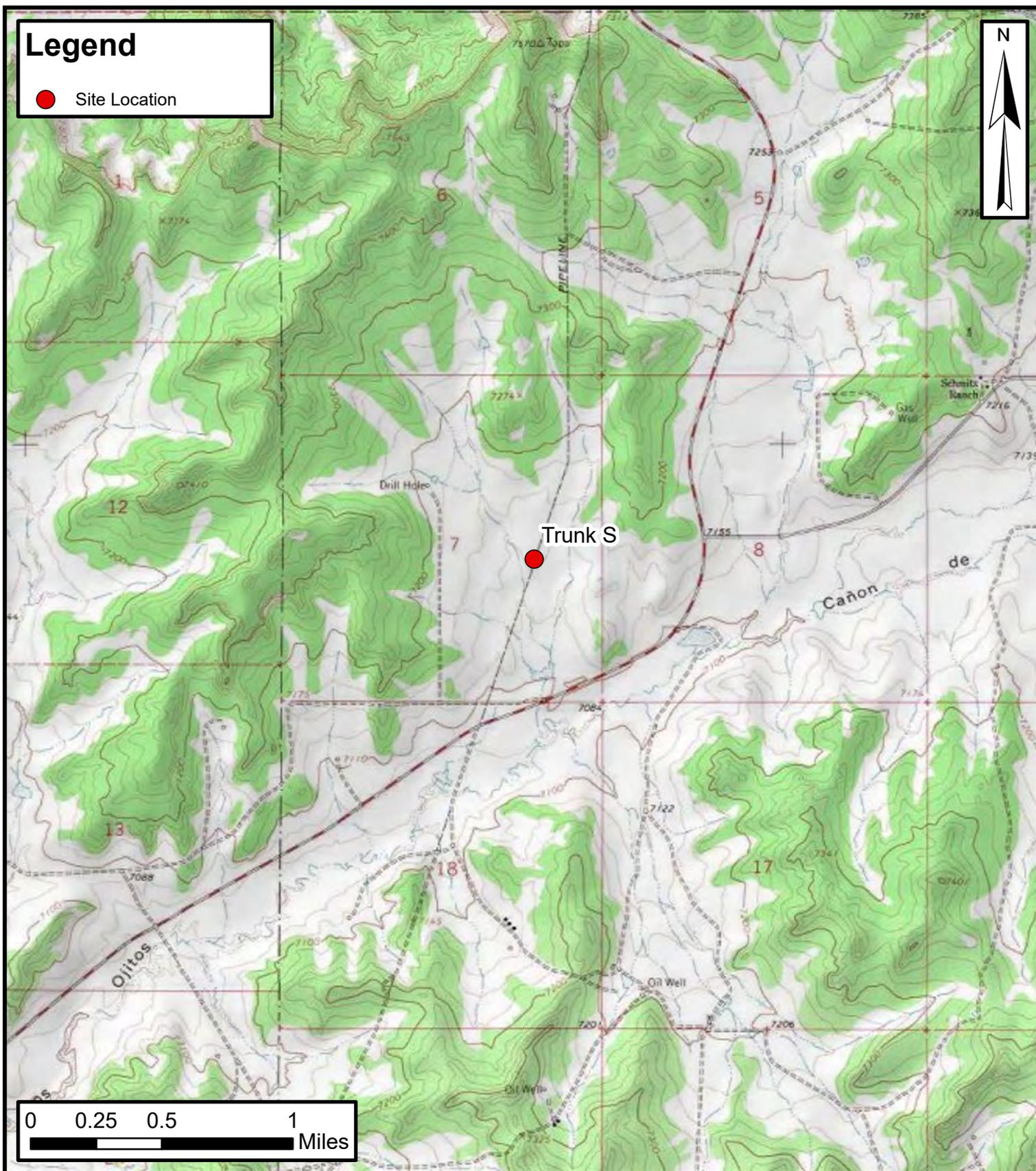
Brooke Herb  
Senior Managing Geologist

## APPENDICES

- Figure 1 – Site Location Map
- Figure 2 – SVE System Layout and Proposed Borehole Locations
- 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



FIGURES



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

**FIGURE**  
**1**



**SVE System Layout and Proposed Borehole Locations**  
Trunk S  
Harvest Four Corners, LLC  
36.41189°, -107.18085°  
Rio Arriba County, New Mexico

**FIGURE 2**



TABLES



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

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
6/21/2023	418	2.2	15	2.3	27	2,000	21.04	0.54
9/20/2023	318	1.3	16	2.4	35	1,700	21.42	0.53
12/21/2023	325	0.9	9.8	2.0	28	1,400	21.54	0.50
3/28/2024	223	0.82	12	2.9	48	1,500	21.54	0.37

**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



**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
6/21/2023	418	2.2	15	2.3	27	2,000
9/20/2023	318	1.3	16	2.4	35	1,700
12/21/2023	325	0.9	9.8	2.0	28	1,400
3/28/2024	223	0.82	12	2.9	48	1,500
<b>Average</b>	848	115	205	12	163	13,200



**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
6/21/2023	71	55,425,312	4,626,360	0.00	0.01	0.001	0.01	0.38
9/20/2023	65	60,123,492	4,698,180	0.00	0.00	0.001	0.01	0.47
12/21/2023	90	65,258,892	5,135,400	0.00	0.00	0.001	0.01	0.45
3/28/2024	77	69,888,132	4,629,240	0.00	0.00	0.001	0.01	0.45
<b>Average</b>				0.05	0.08	0.00	0.05	4.80



**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
6/21/2023	12,779	1,086	1	6	1	9	413	0.2
9/20/2023	13,993	1,214	1	5	1	9	569	0.3
12/21/2023	14,944	951	0	4	1	10	426	0.2
3/28/2024	15,946	1,002	0	3	1	11	454	0.2
<b>Total Mass Recovery to Date</b>			465	810	41	603	84,364	42.18

**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<sup>3</sup>) \* Air Flow Rates (cfm) \* (1 m<sup>3</sup>/35.3147 ft<sup>3</sup>) \* (1 lb/453,592 mg) \* Time Period (min)



APPENDIX A

Photographic Log



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

Photo #1  
SVE Hours Reading 1/16/2024





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

Photo #2  
SVE Hours Reading 2/20/2024

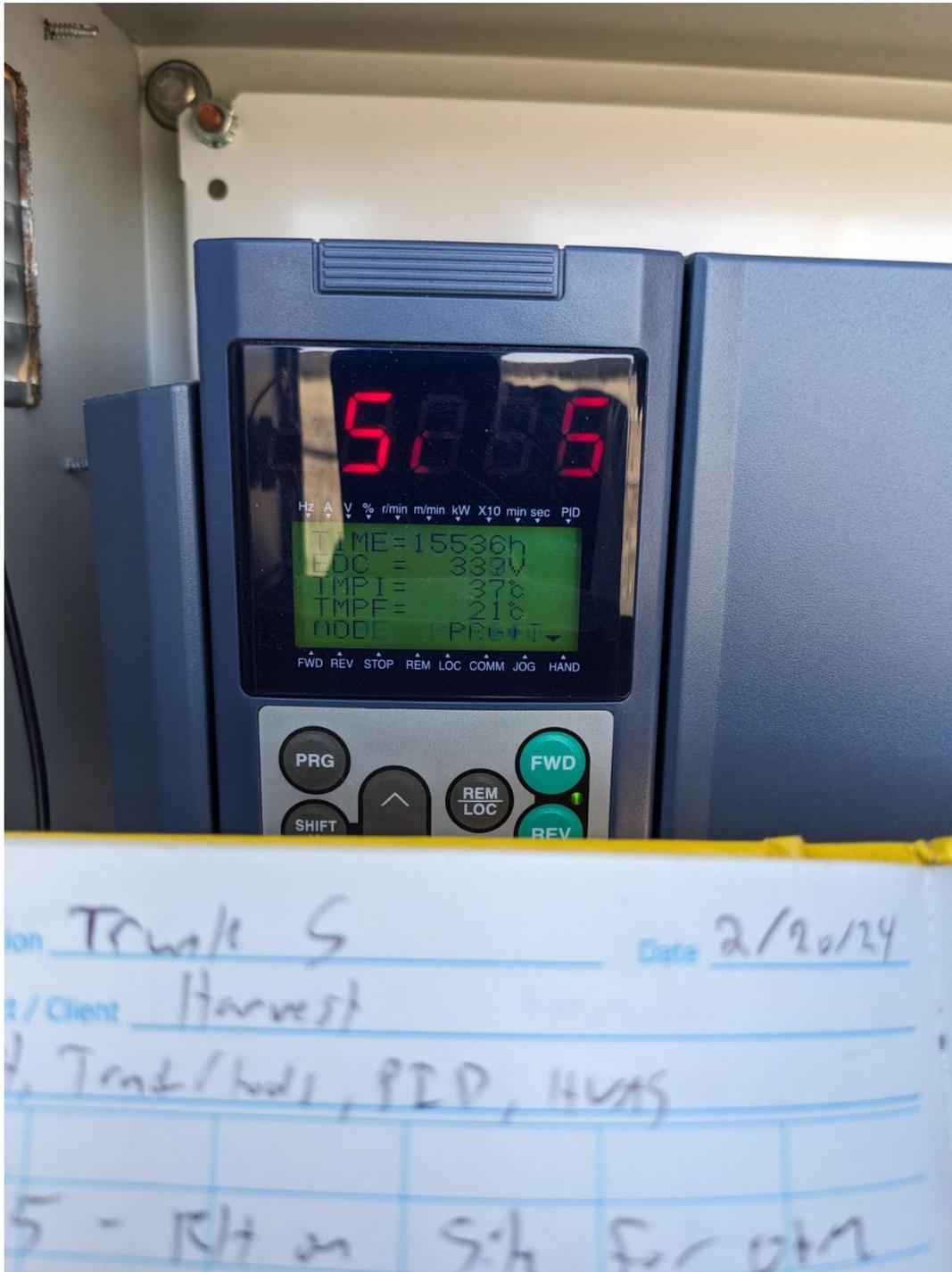


Photo #3  
SVE Hours Reading 3/28/2024





## APPENDIX B

### Laboratory Analytical Report



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Monica Smith  
 Harvest  
 1755 Arroyo Dr.  
 Bloomfield, New Mexico 87413

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## JOB DESCRIPTION

Trunk S

## JOB NUMBER

885-2014-1

Eurofins Albuquerque  
 4901 Hawkins NE  
 Albuquerque NM 87109



# Eurofins Albuquerque

## Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



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Authorized for release by  
Andy Freeman, Business Unit Manager  
[andy.freeman@et.eurofinsus.com](mailto:andy.freeman@et.eurofinsus.com)  
(505)345-3975

Client: Harvest  
Project/Site: Trunk S

Laboratory Job ID: 885-2014-1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	3
Definitions/Glossary . . . . .	4
Case Narrative . . . . .	5
Client Sample Results . . . . .	6
QC Sample Results . . . . .	8
QC Association Summary . . . . .	11
Lab Chronicle . . . . .	12
Certification Summary . . . . .	13
Subcontract Data . . . . .	16
Chain of Custody . . . . .	22
Receipt Checklists . . . . .	23

## Definitions/Glossary

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Harvest  
Project: Trunk S

Job ID: 885-2014-1

**Job ID: 885-2014-1**

**Eurofins Albuquerque**

## Job Narrative 885-2014-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The sample was received on 3/29/2024 7:55 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 21.1°C.

### Subcontract Work

Method Fixed Gases - Energy Lab: This method was subcontracted to Energy Laboratories, Inc. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

### GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Albuquerque



## Client Sample Results

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

Client Sample ID: Trunk S Q1 Influent

Lab Sample ID: 885-2014-1

Date Collected: 03/28/24 11:25

Matrix: Air

Date Received: 03/29/24 07:55

Sample Container: Tedlar Bag 1L

## Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	1500		25	ug/L			04/05/24 15:20	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		62 - 130				04/05/24 15:20	5

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			04/05/24 15:20	5
1,1,1-Trichloroethane	ND		0.50	ug/L			04/05/24 15:20	5
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			04/05/24 15:20	5
1,1,2-Trichloroethane	ND		0.50	ug/L			04/05/24 15:20	5
1,1-Dichloroethane	ND		0.50	ug/L			04/05/24 15:20	5
1,1-Dichloroethene	ND		0.50	ug/L			04/05/24 15:20	5
1,1-Dichloropropene	ND		0.50	ug/L			04/05/24 15:20	5
1,2,3-Trichlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
1,2,3-Trichloropropane	ND		1.0	ug/L			04/05/24 15:20	5
1,2,4-Trichlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
<b>1,2,4-Trimethylbenzene</b>	<b>2.5</b>		0.50	ug/L			04/05/24 15:20	5
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L			04/05/24 15:20	5
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			04/05/24 15:20	5
1,2-Dichlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
1,2-Dichloroethane (EDC)	ND		0.50	ug/L			04/05/24 15:20	5
1,2-Dichloropropane	ND		0.50	ug/L			04/05/24 15:20	5
<b>1,3,5-Trimethylbenzene</b>	<b>2.9</b>		0.50	ug/L			04/05/24 15:20	5
1,3-Dichlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
1,3-Dichloropropane	ND		0.50	ug/L			04/05/24 15:20	5
1,4-Dichlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
1-Methylnaphthalene	ND		2.0	ug/L			04/05/24 15:20	5
2,2-Dichloropropane	ND		1.0	ug/L			04/05/24 15:20	5
2-Butanone	ND		5.0	ug/L			04/05/24 15:20	5
2-Chlorotoluene	ND		0.50	ug/L			04/05/24 15:20	5
2-Hexanone	ND		5.0	ug/L			04/05/24 15:20	5
2-Methylnaphthalene	ND		2.0	ug/L			04/05/24 15:20	5
4-Chlorotoluene	ND		0.50	ug/L			04/05/24 15:20	5
4-Isopropyltoluene	ND		0.50	ug/L			04/05/24 15:20	5
4-Methyl-2-pentanone	ND		5.0	ug/L			04/05/24 15:20	5
Acetone	ND		5.0	ug/L			04/05/24 15:20	5
<b>Benzene</b>	<b>0.82</b>		0.50	ug/L			04/05/24 15:20	5
Bromobenzene	ND		0.50	ug/L			04/05/24 15:20	5
Bromodichloromethane	ND		0.50	ug/L			04/05/24 15:20	5
Dibromochloromethane	ND		0.50	ug/L			04/05/24 15:20	5
Bromoform	ND		0.50	ug/L			04/05/24 15:20	5
Bromomethane	ND		1.5	ug/L			04/05/24 15:20	5
Carbon disulfide	ND		5.0	ug/L			04/05/24 15:20	5
Carbon tetrachloride	ND		0.50	ug/L			04/05/24 15:20	5
Chlorobenzene	ND		0.50	ug/L			04/05/24 15:20	5
Chloroethane	ND		1.0	ug/L			04/05/24 15:20	5
Chloroform	ND		0.50	ug/L			04/05/24 15:20	5

Eurofins Albuquerque

## Client Sample Results

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

Client Sample ID: Trunk S Q1 Influent

Lab Sample ID: 885-2014-1

Date Collected: 03/28/24 11:25

Matrix: Air

Date Received: 03/29/24 07:55

Sample Container: Tedlar Bag 1L

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.5	ug/L			04/05/24 15:20	5
cis-1,2-Dichloroethene	ND		0.50	ug/L			04/05/24 15:20	5
cis-1,3-Dichloropropene	ND		0.50	ug/L			04/05/24 15:20	5
Dibromomethane	ND		0.50	ug/L			04/05/24 15:20	5
Dichlorodifluoromethane	ND		0.50	ug/L			04/05/24 15:20	5
<b>Ethylbenzene</b>	<b>2.9</b>		0.50	ug/L			04/05/24 15:20	5
Hexachlorobutadiene	ND		0.50	ug/L			04/05/24 15:20	5
<b>Isopropylbenzene</b>	<b>0.71</b>		0.50	ug/L			04/05/24 15:20	5
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			04/05/24 15:20	5
Methylene Chloride	ND		1.5	ug/L			04/05/24 15:20	5
n-Butylbenzene	ND		1.5	ug/L			04/05/24 15:20	5
<b>N-Propylbenzene</b>	<b>0.89</b>		0.50	ug/L			04/05/24 15:20	5
Naphthalene	ND		1.0	ug/L			04/05/24 15:20	5
sec-Butylbenzene	ND		0.50	ug/L			04/05/24 15:20	5
Styrene	ND		0.50	ug/L			04/05/24 15:20	5
tert-Butylbenzene	ND		0.50	ug/L			04/05/24 15:20	5
Tetrachloroethene (PCE)	ND		0.50	ug/L			04/05/24 15:20	5
<b>Toluene</b>	<b>12</b>		0.50	ug/L			04/05/24 15:20	5
trans-1,2-Dichloroethene	ND		0.50	ug/L			04/05/24 15:20	5
trans-1,3-Dichloropropene	ND		0.50	ug/L			04/05/24 15:20	5
Trichloroethene (TCE)	ND		0.50	ug/L			04/05/24 15:20	5
Trichlorofluoromethane	ND		0.50	ug/L			04/05/24 15:20	5
Vinyl chloride	ND		0.50	ug/L			04/05/24 15:20	5
<b>Xylenes, Total</b>	<b>48</b>		0.75	ug/L			04/05/24 15:20	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		70 - 130		04/05/24 15:20	5
Toluene-d8 (Surr)	119		70 - 130		04/05/24 15:20	5
4-Bromofluorobenzene (Surr)	111		70 - 130		04/05/24 15:20	5
Dibromofluoromethane (Surr)	91		70 - 130		04/05/24 15:20	5

Eurofins Albuquerque

### QC Sample Results

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

#### Method: 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-2921/3  
Matrix: Air  
Analysis Batch: 2921

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	ug/L			04/05/24 14:07	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		62 - 130				04/05/24 14:07	1

Lab Sample ID: LCS 885-2921/2  
Matrix: Air  
Analysis Batch: 2921

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	500	500		ug/L		100	
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	101		62 - 130				

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-2920/3  
Matrix: Air  
Analysis Batch: 2920

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	ug/L			04/05/24 14:07	1
1,1,1-Trichloroethane	ND		0.10	ug/L			04/05/24 14:07	1
1,1,2,2-Tetrachloroethane	ND		0.20	ug/L			04/05/24 14:07	1
1,1,2-Trichloroethane	ND		0.10	ug/L			04/05/24 14:07	1
1,1-Dichloroethane	ND		0.10	ug/L			04/05/24 14:07	1
1,1-Dichloroethene	ND		0.10	ug/L			04/05/24 14:07	1
1,1-Dichloropropene	ND		0.10	ug/L			04/05/24 14:07	1
1,2,3-Trichlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,2,3-Trichloropropane	ND		0.20	ug/L			04/05/24 14:07	1
1,2,4-Trichlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,2,4-Trimethylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,2-Dibromo-3-Chloropropane	ND		0.20	ug/L			04/05/24 14:07	1
1,2-Dibromoethane (EDB)	ND		0.10	ug/L			04/05/24 14:07	1
1,2-Dichlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,2-Dichloroethane (EDC)	ND		0.10	ug/L			04/05/24 14:07	1
1,2-Dichloropropane	ND		0.10	ug/L			04/05/24 14:07	1
1,3,5-Trimethylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,3-Dichlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
1,3-Dichloropropane	ND		0.10	ug/L			04/05/24 14:07	1
1,4-Dichlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
1-Methylnaphthalene	ND		0.40	ug/L			04/05/24 14:07	1
2,2-Dichloropropane	ND		0.20	ug/L			04/05/24 14:07	1
2-Butanone	ND		1.0	ug/L			04/05/24 14:07	1
2-Chlorotoluene	ND		0.10	ug/L			04/05/24 14:07	1
2-Hexanone	ND		1.0	ug/L			04/05/24 14:07	1

Eurofins Albuquerque

## QC Sample Results

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 885-2920/3

Matrix: Air

Analysis Batch: 2920

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.40	ug/L			04/05/24 14:07	1
4-Chlorotoluene	ND		0.10	ug/L			04/05/24 14:07	1
4-Isopropyltoluene	ND		0.10	ug/L			04/05/24 14:07	1
4-Methyl-2-pentanone	ND		1.0	ug/L			04/05/24 14:07	1
Acetone	ND		1.0	ug/L			04/05/24 14:07	1
Benzene	ND		0.10	ug/L			04/05/24 14:07	1
Bromobenzene	ND		0.10	ug/L			04/05/24 14:07	1
Bromodichloromethane	ND		0.10	ug/L			04/05/24 14:07	1
Dibromochloromethane	ND		0.10	ug/L			04/05/24 14:07	1
Bromoform	ND		0.10	ug/L			04/05/24 14:07	1
Bromomethane	ND		0.30	ug/L			04/05/24 14:07	1
Carbon disulfide	ND		1.0	ug/L			04/05/24 14:07	1
Carbon tetrachloride	ND		0.10	ug/L			04/05/24 14:07	1
Chlorobenzene	ND		0.10	ug/L			04/05/24 14:07	1
Chloroethane	ND		0.20	ug/L			04/05/24 14:07	1
Chloroform	ND		0.10	ug/L			04/05/24 14:07	1
Chloromethane	ND		0.30	ug/L			04/05/24 14:07	1
cis-1,2-Dichloroethene	ND		0.10	ug/L			04/05/24 14:07	1
cis-1,3-Dichloropropene	ND		0.10	ug/L			04/05/24 14:07	1
Dibromomethane	ND		0.10	ug/L			04/05/24 14:07	1
Dichlorodifluoromethane	ND		0.10	ug/L			04/05/24 14:07	1
Ethylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
Hexachlorobutadiene	ND		0.10	ug/L			04/05/24 14:07	1
Isopropylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
Methyl-tert-butyl Ether (MTBE)	ND		0.10	ug/L			04/05/24 14:07	1
Methylene Chloride	ND		0.30	ug/L			04/05/24 14:07	1
n-Butylbenzene	ND		0.30	ug/L			04/05/24 14:07	1
N-Propylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
Naphthalene	ND		0.20	ug/L			04/05/24 14:07	1
sec-Butylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
Styrene	ND		0.10	ug/L			04/05/24 14:07	1
tert-Butylbenzene	ND		0.10	ug/L			04/05/24 14:07	1
Tetrachloroethene (PCE)	ND		0.10	ug/L			04/05/24 14:07	1
Toluene	ND		0.10	ug/L			04/05/24 14:07	1
trans-1,2-Dichloroethene	ND		0.10	ug/L			04/05/24 14:07	1
trans-1,3-Dichloropropene	ND		0.10	ug/L			04/05/24 14:07	1
Trichloroethene (TCE)	ND		0.10	ug/L			04/05/24 14:07	1
Trichlorofluoromethane	ND		0.10	ug/L			04/05/24 14:07	1
Vinyl chloride	ND		0.10	ug/L			04/05/24 14:07	1
Xylenes, Total	ND		0.15	ug/L			04/05/24 14:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		04/05/24 14:07	1
Toluene-d8 (Surr)	98		70 - 130		04/05/24 14:07	1
4-Bromofluorobenzene (Surr)	99		70 - 130		04/05/24 14:07	1
Dibromofluoromethane (Surr)	102		70 - 130		04/05/24 14:07	1

Eurofins Albuquerque

### QC Sample Results

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

**Lab Sample ID: LCS 885-2920/2**  
**Matrix: Air**  
**Analysis Batch: 2920**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	20.1	19.1		ug/L		95	
Benzene	20.1	20.5		ug/L		102	
Chlorobenzene	20.1	21.0		ug/L		105	
Toluene	20.2	20.7		ug/L		102	
Trichloroethene (TCE)	20.2	19.4		ug/L		96	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130

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# QC Association Summary

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## GC/MS VOA

### Analysis Batch: 2920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2014-1	Trunk S Q1 Influent	Total/NA	Air	8260B	
MB 885-2920/3	Method Blank	Total/NA	Air	8260B	
LCS 885-2920/2	Lab Control Sample	Total/NA	Air	8260B	

### Analysis Batch: 2921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2014-1	Trunk S Q1 Influent	Total/NA	Air	8015D	
MB 885-2921/3	Method Blank	Total/NA	Air	8015D	
LCS 885-2921/2	Lab Control Sample	Total/NA	Air	8015D	

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# Lab Chronicle

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

**Client Sample ID: Trunk S Q1 Influent**

**Lab Sample ID: 885-2014-1**

**Date Collected: 03/28/24 11:25**

**Matrix: Air**

**Date Received: 03/29/24 07:55**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		5	2921	CM	EET ALB	04/05/24 15:20
Total/NA	Analysis	8260B		5	2920	CM	EET ALB	04/05/24 15:20

**Laboratory References:**

= , 1120 South 27th Street, Billings, MT 59107

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

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# Accreditation/Certification Summary

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropane
8260B		Air	Dibromochloromethane

Eurofins Albuquerque

# Accreditation/Certification Summary

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Air	Gasoline Range Organics [C6 - C10]
8260B		Air	1,1,1,2-Tetrachloroethane
8260B		Air	1,1,1-Trichloroethane
8260B		Air	1,1,2,2-Tetrachloroethane
8260B		Air	1,1,2-Trichloroethane
8260B		Air	1,1-Dichloroethane
8260B		Air	1,1-Dichloroethene
8260B		Air	1,1-Dichloropropene
8260B		Air	1,2,3-Trichlorobenzene
8260B		Air	1,2,3-Trichloropropane
8260B		Air	1,2,4-Trichlorobenzene
8260B		Air	1,2,4-Trimethylbenzene
8260B		Air	1,2-Dibromo-3-Chloropropane
8260B		Air	1,2-Dibromoethane (EDB)
8260B		Air	1,2-Dichlorobenzene
8260B		Air	1,2-Dichloroethane (EDC)
8260B		Air	1,2-Dichloropropane
8260B		Air	1,3,5-Trimethylbenzene
8260B		Air	1,3-Dichlorobenzene
8260B		Air	1,3-Dichloropropane
8260B		Air	1,4-Dichlorobenzene

Eurofins Albuquerque

## Accreditation/Certification Summary

Client: Harvest  
Project/Site: Trunk S

Job ID: 885-2014-1

## Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Air	1-Methylnaphthalene
8260B		Air	2,2-Dichloropropane
8260B		Air	2-Butanone
8260B		Air	2-Chlorotoluene
8260B		Air	2-Hexanone
8260B		Air	2-Methylnaphthalene
8260B		Air	4-Chlorotoluene
8260B		Air	4-Isopropyltoluene
8260B		Air	4-Methyl-2-pentanone
8260B		Air	Acetone
8260B		Air	Benzene
8260B		Air	Bromobenzene
8260B		Air	Bromodichloromethane
8260B		Air	Bromoform
8260B		Air	Bromomethane
8260B		Air	Carbon disulfide
8260B		Air	Carbon tetrachloride
8260B		Air	Chlorobenzene
8260B		Air	Chloroethane
8260B		Air	Chloroform
8260B		Air	Chloromethane
8260B		Air	cis-1,2-Dichloroethene
8260B		Air	cis-1,3-Dichloropropene
8260B		Air	Dibromochloromethane
8260B		Air	Dibromomethane
8260B		Air	Dichlorodifluoromethane
8260B		Air	Ethylbenzene
8260B		Air	Hexachlorobutadiene
8260B		Air	Isopropylbenzene
8260B		Air	Methylene Chloride
8260B		Air	Methyl-tert-butyl Ether (MTBE)
8260B		Air	Naphthalene
8260B		Air	n-Butylbenzene
8260B		Air	N-Propylbenzene
8260B		Air	sec-Butylbenzene
8260B		Air	Styrene
8260B		Air	tert-Butylbenzene
8260B		Air	Tetrachloroethene (PCE)
8260B		Air	Toluene
8260B		Air	trans-1,2-Dichloroethene
8260B		Air	trans-1,3-Dichloropropene
8260B		Air	Trichloroethene (TCE)
8260B		Air	Trichlorofluoromethane
8260B		Air	Vinyl chloride
8260B		Air	Xylenes, Total

Eurofins Albuquerque



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# ANALYTICAL SUMMARY REPORT

April 09, 2024

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

Work Order: B24040199      Quote ID: B15626

Project Name: Trunk S, 88501083

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 4/3/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24040199-001	Trunk S Q1 Influent (885-2014-1)	03/28/24 11:25	04/03/24	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:** Trunk S, 88501083  
**Lab ID:** B24040199-001  
**Client Sample ID:** Trunk S Q1 Influent (885-2014-1)

**Report Date:** 04/09/24  
**Collection Date:** 03/28/24 11:25  
**Date Received:** 04/03/24  
**Matrix:** Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>GAS CHROMATOGRAPHY ANALYSIS REPORT</b>							
Oxygen	21.54	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Nitrogen	78.07	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Carbon Dioxide	0.37	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Hydrogen Sulfide	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Methane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Ethane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Propane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Isobutane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
n-Butane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Isopentane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
n-Pentane	<0.01	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Hexanes plus	0.02	Mol %		0.01		GPA 2261-95	04/08/24 11:16 / jrj
Propane	< 0.001	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
Isobutane	< 0.001	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
n-Butane	< 0.001	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
Isopentane	< 0.001	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
n-Pentane	< 0.001	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
Hexanes plus	0.008	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
GPM Total	0.008	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj
GPM Pentanes plus	0.008	gpm		0.001		GPA 2261-95	04/08/24 11:16 / jrj

#### CALCULATED PROPERTIES

Gross BTU per cu ft @ Std Cond. (HHV)	1			1		GPA 2261-95	04/08/24 11:16 / jrj
Net BTU per cu ft @ std cond. (LHV)	1			1		GPA 2261-95	04/08/24 11:16 / jrj
Pseudo-critical Pressure, psia	546			1		GPA 2261-95	04/08/24 11:16 / jrj
Pseudo-critical Temperature, deg R	240			1		GPA 2261-95	04/08/24 11:16 / jrj
Specific Gravity @ 60/60F	1.00			0.001		D3588-81	04/08/24 11:16 / jrj
Air, %	98.40			0.01		GPA 2261-95	04/08/24 11:16 / jrj

- The analysis was not corrected for air.

#### COMMENTS

- 04/08/24 11:16 / jrj

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

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

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



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### QA/QC Summary Report

Prepared by Billings, MT Branch

**Client:** Hall Environmental

**Work Order:** B24040199

**Report Date:** 04/09/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: GPA 2261-95</b>								Batch: R419350		
<b>Lab ID: B24040199-001ADUP</b>	12 Sample Duplicate				Run: GCNGA-B_240408A			04/08/24 12:06		
Oxygen		21.5	Mol %	0.01				0.2	20	
Nitrogen		78.1	Mol %	0.01				0.1	20	
Carbon Dioxide		0.37	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		0.02	Mol %	0.01				0.0	20	
<b>Lab ID: LCS040824</b>								04/08/24 01:59		
11 Laboratory Control Sample								Run: GCNGA-B_240408A		
Oxygen		0.62	Mol %	0.01	124	70	130			
Nitrogen		6.29	Mol %	0.01	105	70	130			
Carbon Dioxide		1.00	Mol %	0.01	101	70	130			
Methane		74.5	Mol %	0.01	100	70	130			
Ethane		6.01	Mol %	0.01	100	70	130			
Propane		5.02	Mol %	0.01	102	70	130			
Isobutane		1.78	Mol %	0.01	89	70	130			
n-Butane		2.00	Mol %	0.01	100	70	130			
Isopentane		1.01	Mol %	0.01	101	70	130			
n-Pentane		1.01	Mol %	0.01	101	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

## B24040199

Login completed by: Crystal M. Jones

Date Received: 4/3/2024

Reviewed by: gmccartney

Received by: DNH

Reviewed Date: 4/4/2024

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	19.2°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

### Standard Reporting Procedures:

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

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

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

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







**ICOC No:**  
885-271

**Containers**

Count  
1

Container Type  
Tedlar Bag 1L

Preservative  
None

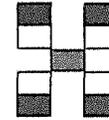
# Chain-of-Custody Record

Turn-Around Time:  
 Standard     Rush

Client: Harvest Midstream thru Monica Smith  
m.smith@harvestmidstream.com

Mailing Address:  
Trunk S

Project #:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



885-2014 COC

Project Manager: Reece Hanson  
rhanson@ansolv.com

Project Manager: Zach Hughes  
 On Ice:  Yes     No Yogi

# of Coolers: 1

Cooler Temp (including CF): 0.1 - 0.1 = 0.0 (°C)

Container Type and #	Preservative Type	HEAL No.
<u>2x tallies</u>	<u>-</u>	

Date	Time	Matrix	Sample Name
<u>3-28</u>	<u>1125</u>	<u>gas</u>	<u>Trunk S Q1 Inflow</u>

Analysis Request												
BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MFO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	<u>VOC's 8260 B</u>	<u>TVPH 8015</u>	<u>O<sub>2</sub>, CO<sub>2</sub>, GPA 2261</u>
										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Date: <u>3/28/24</u>	Time: <u>1500</u>	Relinquished by: <u>Zach</u>	Received by: <u>Ch Wat</u>	Via:	Date: <u>3/28/24</u>	Time: <u>1500</u>
Date: <u>3/28/24</u>	Time: <u>1740</u>	Relinquished by: <u>Christina Wachs</u>	Received by: <u>Corey</u>	Via:	Date: <u>3/29/24</u>	Time: <u>0755</u>

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.



### Login Sample Receipt Checklist

Client: Harvest

Job Number: 885-2014-1

**Login Number: 2014**

**List Source: Eurofins Albuquerque**

**List Number: 1**

**Creator: Casarrubias, Tracy**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
TCEQ Mtd 1005 soil sample was frozen/delivered for prep within 48H of sampling.	True	

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### Login Sample Receipt Checklist

Client: Harvest

Job Number: 885-2014-1

**Login Number: 2014**

**List Source: Eurofins Albuquerque**

**List Number: 2**

**Creator: Casarrubias, Tracy**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



**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 339311

**CONDITIONS**

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 339311
	Action Type: [REPORT] Alternative Remediation Report (C-141AR)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Report has been accepted by OCD and Harvest may proceed with its closure plan as written. Harvest has 90-days (July 31, 2024) to implement its plan and 120-days (August 30, 2024) to submit its appropriate or final remediation closure report.	5/2/2024