



April 21, 2021

Cory Smith  
New Mexico Oil Conservation Division  
1000 Rio Brazos  
Aztec, New Mexico 87410

Via electronic mail: [cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

**RE: Q1 2021 Periodic Progress Report  
Trunk S Release (January - March 2021)  
3RP-1014; Incident #NCS1931842879  
Unit I, Section 7, T25N, R3W  
Rio Arriba County, New Mexico**

Dear Mr. Smith:

Animas Environmental Services, LLC (AES) has prepared this Q1 2021 Periodic Progress Report for a release which was discovered June 25, 2019, at the Harvest Four Corners (Harvest) Trunk S natural gas pipeline, located in Rio Arriba County, New Mexico. A topographic site location map is included as Figure 1, and an aerial site map is presented on Figure 2. This report covers site activities from to January through March 2021.

### *1.0 Soil Vapor Extraction (SVE) System*

Harvest Midstream purchased a Varisolar Soil Vapor Extraction (SVE) system in late 2019. The SVE system is constructed of 2-inch Schedule 40 PVC above ground conveyance pipe and fittings. Rotometers are installed on each leg of the manifold to accompany dedicated vacuum gauges and sample ports. A combined vapor stream sample port is located between the influent vapor manifold and the moisture separator, upstream of the blower. Additionally, a sample port was installed on the exhaust stack, downstream of the two granular carbon vessels to facilitate monitoring of emissions concentrations. Full time system operation began on July 16, 2020.

### *2.0 SVE System O&M*

Monthly operations and maintenance (O&M) visits were conducted by AES on:

- January 8, 2021
- February 5, 2021
- March 10, 2021

624 E. Comanche St., Farmington, NM 87401  
PO Box 8, Farmington NM 87499  
505-564-2281  
[www.animasenvironmental.com](http://www.animasenvironmental.com)

Cory Smith NMOCD  
Harvest Trunk S Release (3RP-1014; Incident #1931842879)  
April 21, 2021; Page 2 of 4

During each visit, AES personnel collected system flow, vacuum, and vapor data and to monitor granular activated carbon (GAC) efficiency. A sample of each vapor stream was collected in a Tedlar bag using a small vacuum pump. Influent and effluent vapor concentrations were measured using a calibrated Mini Rae 3000 organic vapor meter (OVM). Field measurements were recorded onto field SVE data sheets and are recorded in Table 1, along with telemetry data.

Additionally, a quarterly sample of the influent vapor stream was collected on January 8, 2021, for laboratory analysis. Two 1-liter Tedlar bags were collected for analysis for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Method 8260B (full list), gasoline-range organics (GRO) by EPA Method 8015, and oxygen and carbon dioxide by Gas Processors Association (GPA) Method 2261. Laboratory analytical data are included in Table 2, and the laboratory analytical report is attached.

Other maintenance activities include the following:

- GAC changeouts were completed on February 5 and March 10, 2021;
- On February 5, 2021, the conveyance piping to SVE -3 was found to have been shattered by what appeared to be ice falling off the solar array. The SE-3 line was disengaged at the manifold until repairs could be made. AES returned to the site on February 11, 2021 and repaired the line and opened the valve at the manifold; and
- On March 10, 2021, a sample port was installed on the primary GAC vessel to gain additional data on GAC efficiency. Additionally, condensate was drained from the SVE conveyance piping and the moisture separator.

Based on telemetry and field readings and analytical data through March 10, 2021, the following SVE operations summary is presented:

<i>Trunk S Solar SVE System Operations Summary</i>	
<i>Total SVE system operating hours since system startup (hrs)</i>	<i>2891</i>
<i>Most recent event SVE system influent PID-OVM reading (ppm)</i>	<i>433</i>
<i>Most recent event Inlet Vacuum (inH<sub>2</sub>o)</i>	<i>-26</i>
<i>Most recent event Actual Flow Rate (acfm)</i>	<i>128</i>

Cory Smith NMOCD  
Harvest Trunk S Release (3RP-1014; Incident #1931842879)  
April 21, 2021; Page 3 of 4

<i>Trunk S Solar SVE System Operations Summary</i>	
<i>Total cumulative standard volume processed since system startup (ft3)</i>	<i>13,882,530</i>
<i>Total estimated petroleum mass removal since system startup (lbs)</i>	<i>30,382</i>
<i>Estimated lbs removed/std ft3 for current reporting period (lbs/std ft3)</i>	<i>0.0033</i>

Note that standard volume process and estimated mass removal have been recalculated since the last progress report because of telemetry calculation errors. System operating parameters and corrected mass removal estimates are detailed in Table 1, and Graph 1 shows cumulative actual flow through March 10, 2021.

#### *4.0 Ongoing SVE System Monitoring and Sampling*

Harvest and AES will maintain SVE runtime greater than or equal to 90 percent per quarter based on available sunlight hours. A soil gas sample for laboratory analysis will be collected quarterly and analyzed for:

- Total petroleum hydrocarbons (TPH) GRO per EPA Method 8015;
- Volatile organics per EPA Method 8260 (full list); and
- Carbon dioxide and oxygen per GPA 2261.

Harvest and AES will submit a quarterly progress report detailing remediation operations to NMOCD. The report will include at a minimum:

- Summary of remediation activity for the quarter;
- SVE run time, SVE operating parameters, and petroleum hydrocarbon mass removal;
- Gas sample analytical data; and
- Documentation of replacement of GAC canisters.

#### *5.0 Schedule*

AES will continue to conduct monthly O&M visits, quarterly vapor field and laboratory analytical sampling, and monitoring and replacing GAC drums as needed. Reports will be submitted on a quarterly basis.

Cory Smith NMOCD  
Harvest Trunk S Release (3RP-1014; Incident #1931842879)  
April 21, 2021; Page 4 of 4

If you have any questions about site conditions, SVE operations, or this report, please do not hesitate to contact Eddie Hubbert or Elizabeth McNally at (505) 564-2281.

Sincerely,



Edward Hubbert  
Project Manager



Elizabeth McNally, P.E.

**Attachments:**

Table 1. SVE Field and Telemetry Operating Parameters  
Table 2. Laboratory Analytical Data  
Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map with SVE Unit and SVE Well Layout  
Graph 1. Estimated Remedial Progress – Mass Removal over Time  
Laboratory Analytical Reports –  
January 8, 2021 Vapor Sampling (Hall No. 2010744)

Cc:  
Monica Smith  
Harvest Midstream Company  
Electronic Mail: [msmith@harvestmidstream.com](mailto:msmith@harvestmidstream.com)

TABLE 1  
SVE FIELD OPERATING TELEMETRY  
PARAMETERS and  
MASS REMOVAL  
Harvest Trunk S

Date	Operating Days	Operating Hours Reading	Field PID-OVM (ppmv)	Inlet Vacuum (in. Hg)	Telemetry Inlet Vacuum** (in. H <sub>2</sub> O)	Field Inlet Temp. (°F)	Field Outlet Temp. (°F)	Telemetry Actual Flow Rate (acfm)**	Telemetry Converted to Standard Flow Rate (scfm)	Total Standard Volume (ft3)	VOCs (GRO) (ug/L)	VOCs (GRO) Removed (lbs/ Δt)	lbs removed/ std ft3
16-Jul-20	0	322	4,268	-0.883	-12	NM	NM	120	88	--	200,000	--	--
3-Sep-20	49	963	1,100	-1.177	-16	NM	NM	119	86	3,346,020	54,357	13,247	0.0040
30-Sep-20	76	1,298	1,200	-1.177	-16	NM	153	120	87	1,738,650	59,000	6,135	0.0035
14-Oct-20	90	1,450	1,357	-1.471	-20	NM	NM	122	86	788,880	68,000	3,119	0.0040
23-Nov-20	130	1,847	2,033	-1.250	-17	54	62	124	92	2,119,980	NM	--	--
8-Jan-21	176	2,275	786	-2.060	-28	50	60	131	94	2,388,240	38,000	7,881	0.0033
5-Feb-21	204	2,543	763	-2.133	-29	36	44	129	96	1,527,600	NM	--	--
10-Mar-21	237	2,891	433	-1.912	-26	50	58	128	93	1,973,160	NM	--	--

**Notes:**

1. PID - photoionization detector; OVM - organic vapor meter
2. ppmv - parts per million by volume (v/v; equivalent to mL/L or mL/m<sup>3</sup>)

3. acfm - measured cubic feet per minute (volumetric flow, calculated based on flow velocity and pipe diameter)
4. total flow - vapor flow between system readings (ΔT)
5. °F - degrees Fahrenheit
6. Site elevation - 7,140 ft amsl
7. \*\*flow readings from telemetry data
8. NM = not measured

**Cumulative Std. Volume**

**13,882,530**

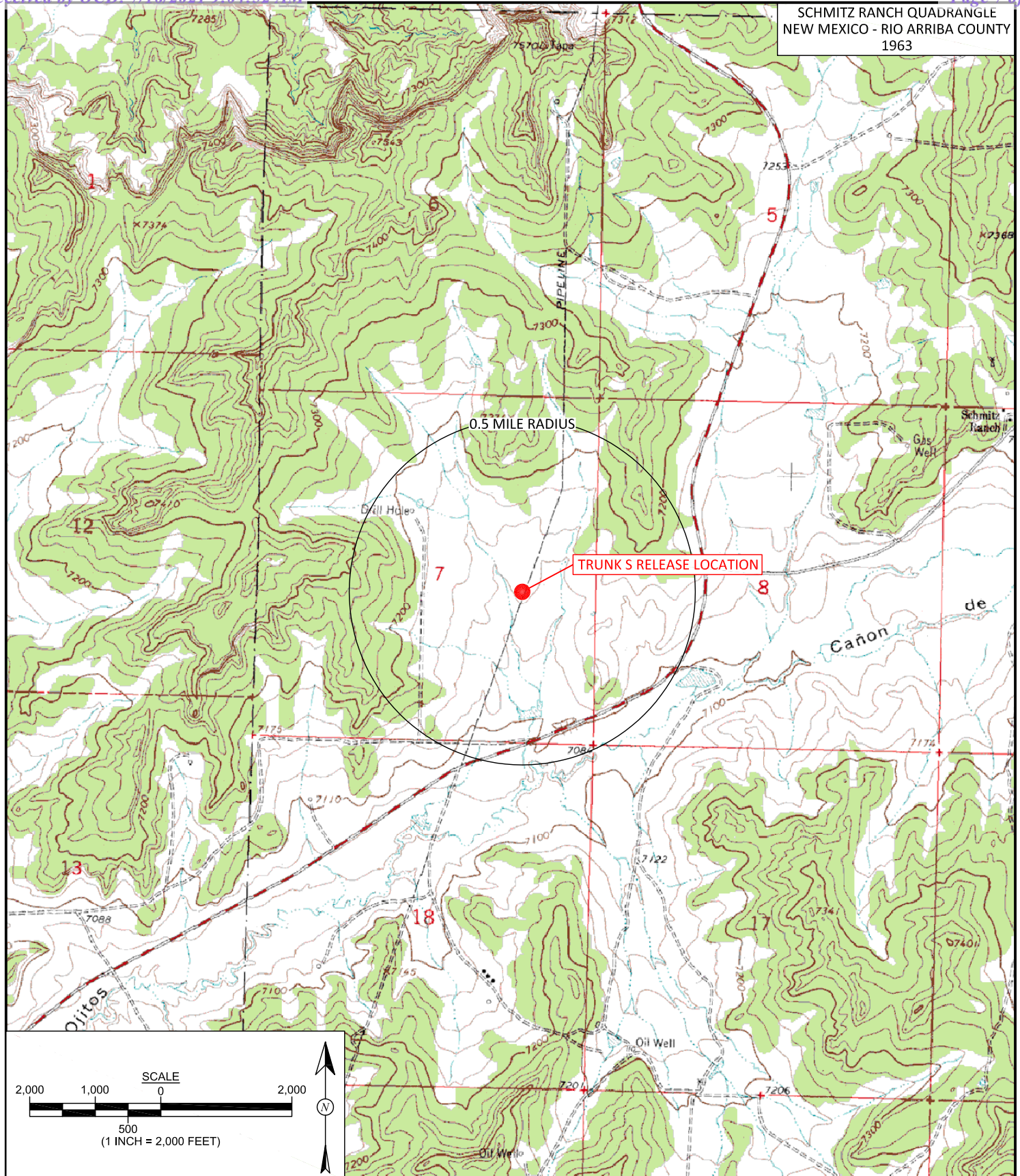
**30,382**

**total lbs removed**

TABLE 2  
SVE VAPOR LABORATORY ANALYTICAL RESULTS  
Harvest Trunk S  
Release 3RP-1014, Incident #NCS1931842879

<b>Date</b>	<b>Benzene μg/L</b>	<b>Toluene μg/L</b>	<b>Ethyl- benzene μg/L</b>	<b>Totals Xylenes μg/L</b>	<b>GRO μg/L</b>	<b>O2 Mol %</b>	<b>CO2 Mol %</b>
16-Jul-20	1700	1570	29.4	518	NS	NS	NS
3-Sep-20	NS	NS	NS	NS	NS	NS	NS
30-Sep-20	NS	NS	NS	NS	NS	NS	NS
14-Oct-20	150	460	15	270	68000	20.94	0.93
23-Nov-20	NS	NS	NS	NS	NS	NS	NS
8-Jan-21	76	310	9.1	150	38000	20.81	0.88





animas  
environmental  
services

Farmington, NM • Durango, CO  
animasenvironmental.com

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
July 22, 2019

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
July 22, 2019

**CHECKED BY:**  
E. McNally

**DATE CHECKED:**  
July 22, 2019

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
July 22, 2019

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
HARVEST MIDSTREAM  
TRUNK S RELEASE LOCATION  
NE $\frac{1}{4}$  SE $\frac{1}{4}$ , SEC. 7, T25N, R3W  
RIO ARriba COUNTY, NEW MEXICO  
N36.41180, -107.18085



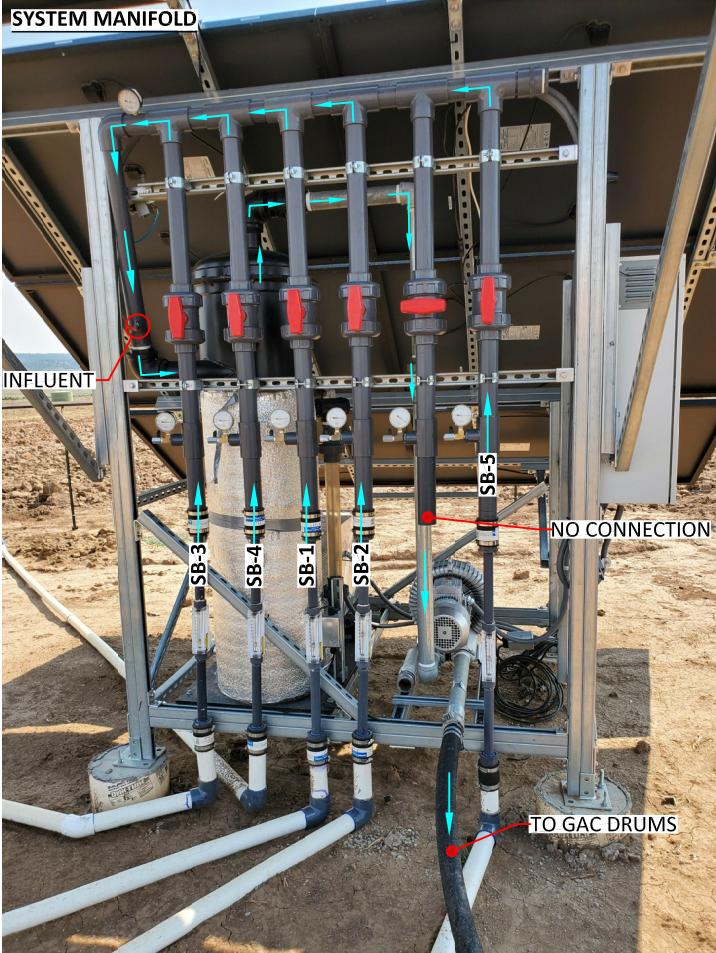
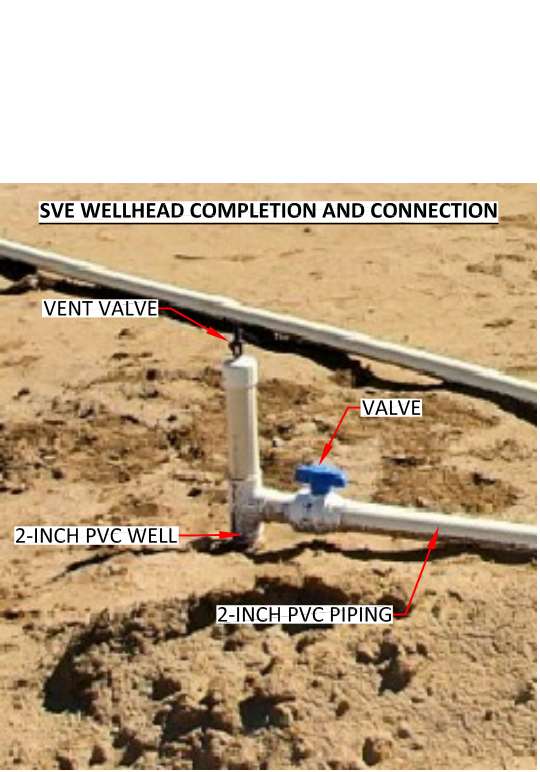
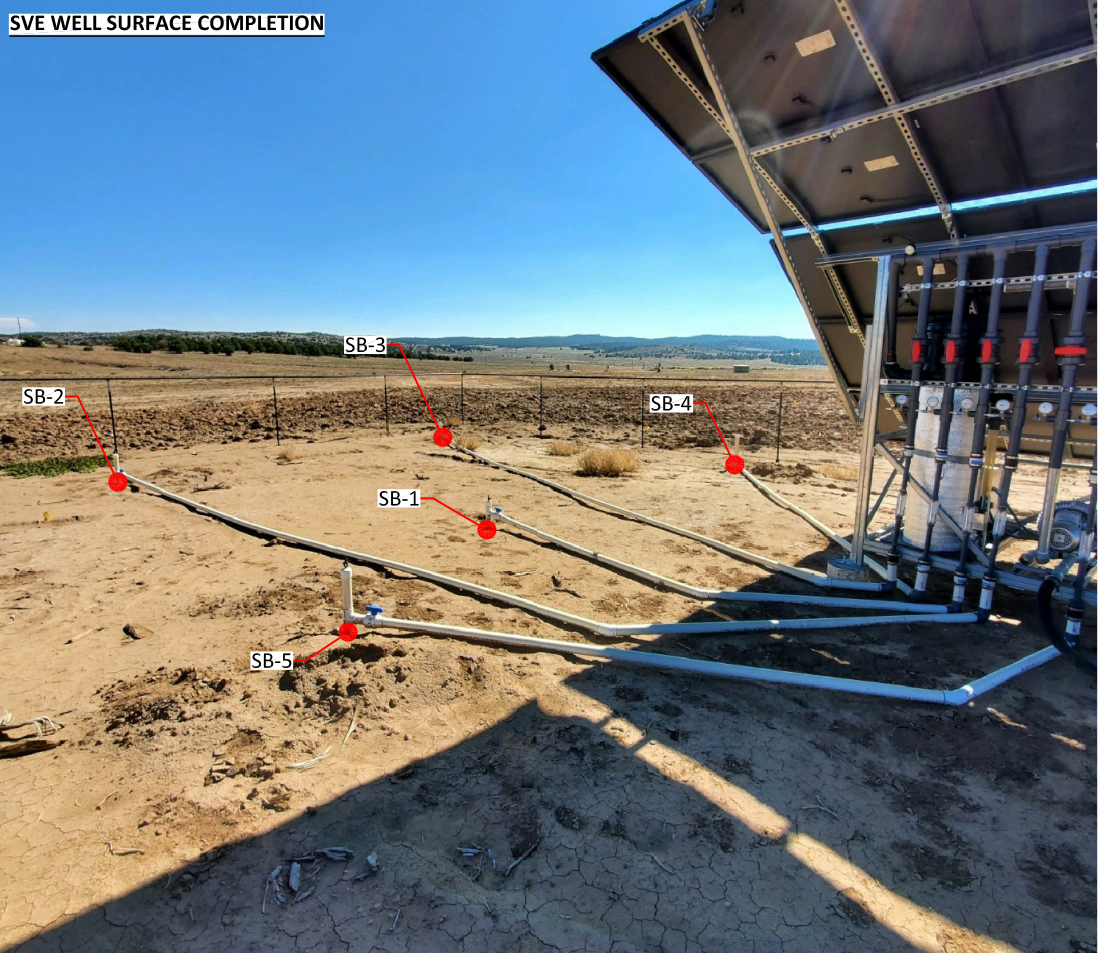
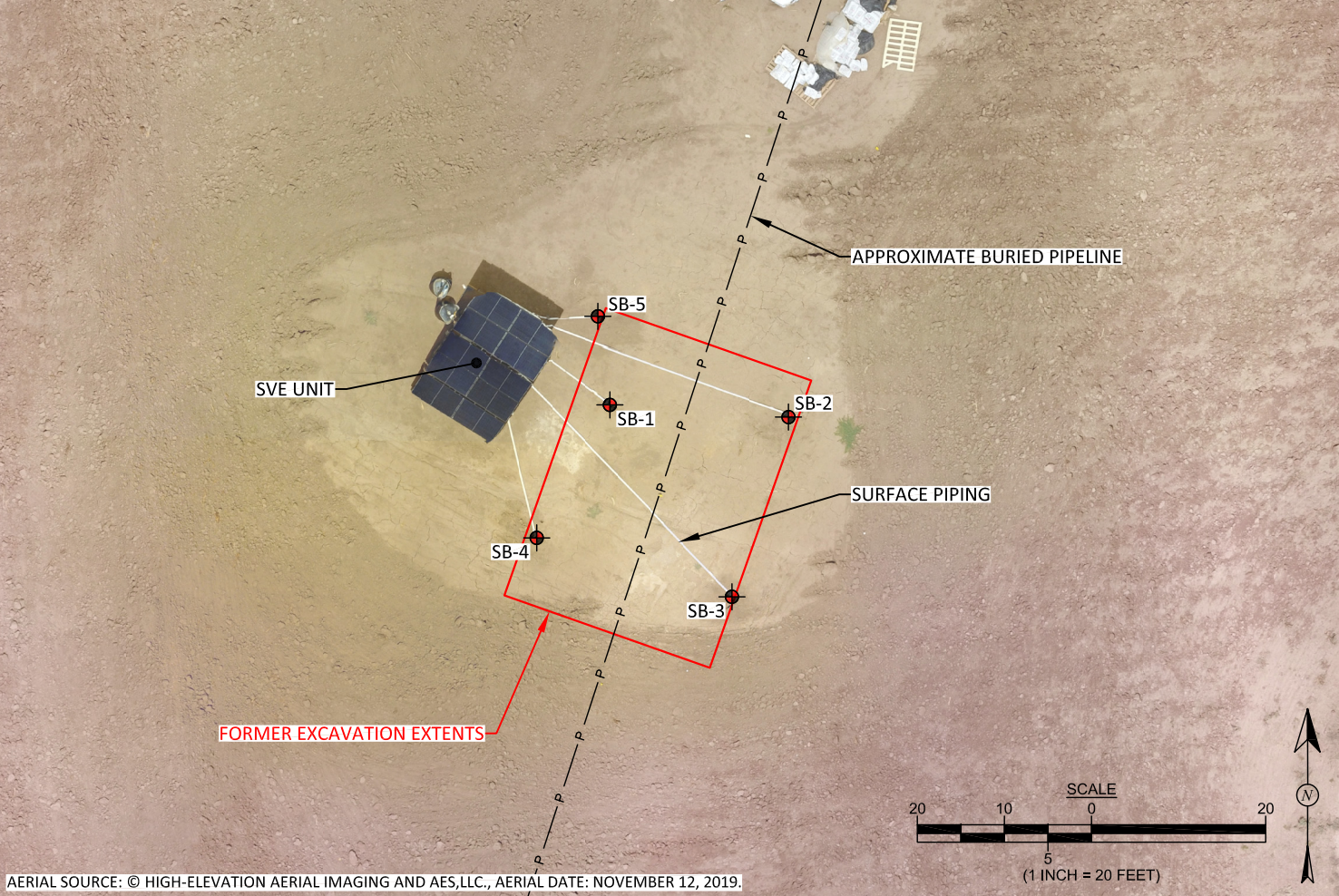
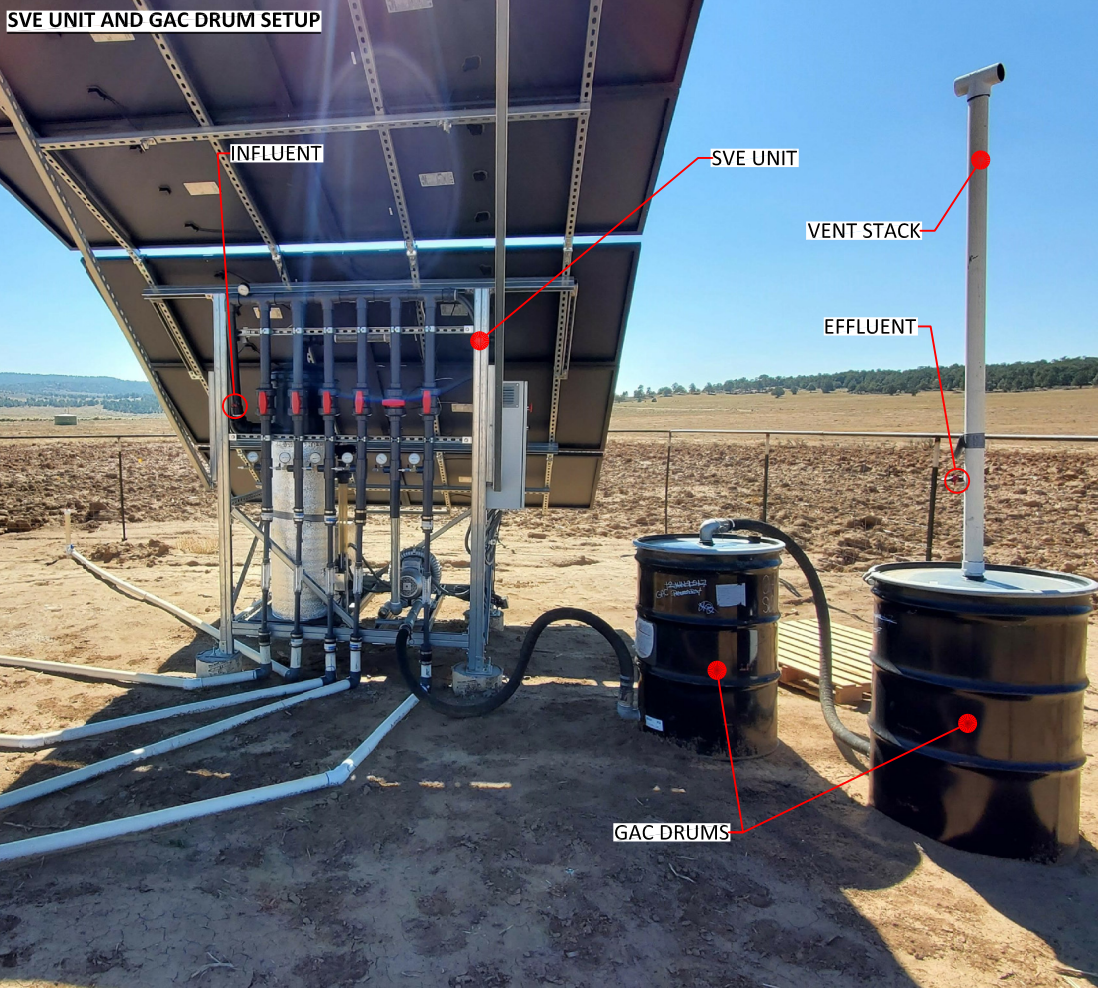


FIGURE 2

**SVE UNIT AND SVE WELL LAYOUT**  
HARVEST MIDSTREAM  
TRUNK S RELEASE LOCATION  
INCIDENT NUMBER: NCS1931842879  
RELEASE ID: 373888  
NE¼ SE¼, SEC. 7, T25N, R3W  
RIO ARriba COUNTY, NEW MEXICO  
N36.41180, W107.18085

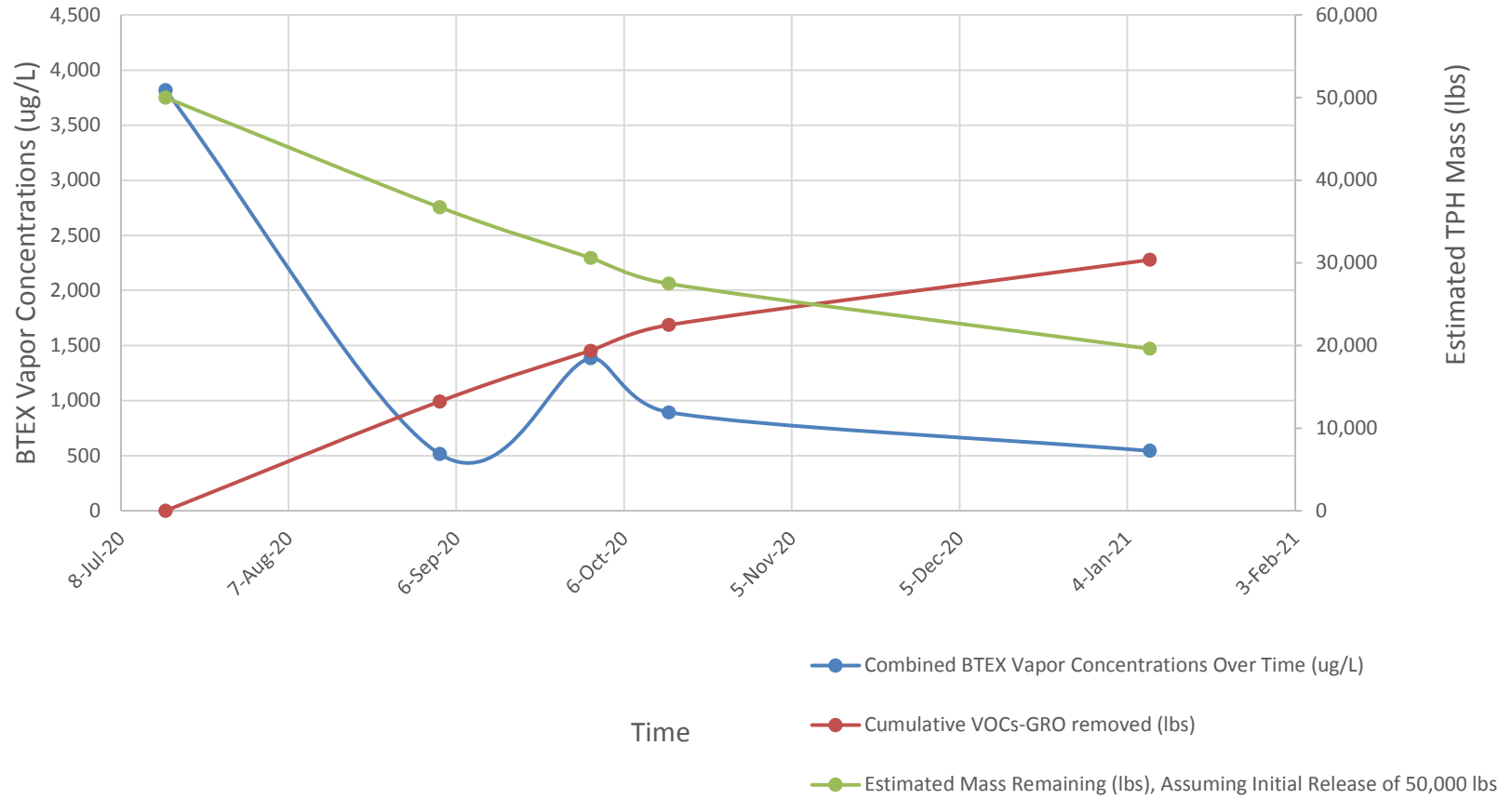


<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 3, 2020
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> October 22, 2020
<b>CHECKED BY:</b> E. McNally	<b>DATE CHECKED:</b> October 22, 2020
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> October 22, 2020

**LEGEND**  
SOIL VAPOR EXTRACTION WELL



Graph 1. Harvest Midstream - Trunk S Release  
2020-21 Remediation Progress- Solar SVE Unit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [clients.hallenvironmental.com](http://clients.hallenvironmental.com)

January 20, 2021

Eddie Hubbert

Animas Environmental Services

624 E. Comanche

Farmington, NM 87401

TEL: (505) 564-2281

FAX: (505) 324-2022

RE: Trunk S

OrderNo.: 2101332

Dear Eddie Hubbert:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/8/2021 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



## Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 2101332

Date Reported: 1/20/2021

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunk S

Collection Date: 1/8/2021 11:35:00 AM

Lab ID: 2101332-001

Matrix: AIR

Received Date: 1/8/2021 3:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMR
Gasoline Range Organics (GRO)	38000	500		µg/L	100	1/11/2021 1:08:16 PM	D74546
Surr: BFB	87.9	70-130		%Rec	100	1/11/2021 1:08:16 PM	D74546
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: JMR
Benzene	76	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Toluene	310	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Ethylbenzene	9.1	5.0		µg/L	100	1/11/2021 1:08:16 PM	B74546
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2,4-Trimethylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,3,5-Trimethylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2-Dichloroethane (EDC)	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2-Dibromoethane (EDB)	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Naphthalene	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
1-Methylnaphthalene	ND	40		µg/L	100	1/11/2021 1:08:16 PM	B74546
2-Methylnaphthalene	ND	40		µg/L	100	1/11/2021 1:08:16 PM	B74546
Acetone	ND	100		µg/L	100	1/11/2021 1:08:16 PM	B74546
Bromobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Bromodichloromethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Bromoform	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Bromomethane	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
2-Butanone	ND	100		µg/L	100	1/11/2021 1:08:16 PM	B74546
Carbon disulfide	ND	100		µg/L	100	1/11/2021 1:08:16 PM	B74546
Carbon tetrachloride	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Chlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Chloroethane	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
Chloroform	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Chloromethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
2-Chlorotoluene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
4-Chlorotoluene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
cis-1,2-DCE	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
cis-1,3-Dichloropropene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2-Dibromo-3-chloropropane	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
Dibromochloromethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Dibromomethane	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2-Dichlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,3-Dichlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,4-Dichlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Dichlorodifluoromethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1-Dichloroethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1-Dichloroethene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546

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

<b>Qualifiers:</b>	*	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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 2101332

Date Reported: 1/20/2021

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunk S

Collection Date: 1/8/2021 11:35:00 AM

Lab ID: 2101332-001

Matrix: AIR

Received Date: 1/8/2021 3:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: JMR
1,2-Dichloropropane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,3-Dichloropropane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
2,2-Dichloropropane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1-Dichloropropene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Hexachlorobutadiene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
2-Hexanone	ND	100		µg/L	100	1/11/2021 1:08:16 PM	B74546
Isopropylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
4-Isopropyltoluene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
4-Methyl-2-pentanone	ND	100		µg/L	100	1/11/2021 1:08:16 PM	B74546
Methylene chloride	ND	30		µg/L	100	1/11/2021 1:08:16 PM	B74546
n-Butylbenzene	ND	30		µg/L	100	1/11/2021 1:08:16 PM	B74546
n-Propylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
sec-Butylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Styrene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
tert-Butylbenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1,1,2-Tetrachloroethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1,2,2-Tetrachloroethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Tetrachloroethene (PCE)	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
trans-1,2-DCE	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
trans-1,3-Dichloropropene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2,3-Trichlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2,4-Trichlorobenzene	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1,1-Trichloroethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,1,2-Trichloroethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Trichloroethene (TCE)	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Trichlorofluoromethane	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
1,2,3-Trichloropropane	ND	20		µg/L	100	1/11/2021 1:08:16 PM	B74546
Vinyl chloride	ND	10		µg/L	100	1/11/2021 1:08:16 PM	B74546
Xylenes, Total	150	15		µg/L	100	1/11/2021 1:08:16 PM	B74546
Surr: Dibromofluoromethane	58.2	70-130	S	%Rec	100	1/11/2021 1:08:16 PM	B74546
Surr: 1,2-Dichloroethane-d4	60.9	70-130	S	%Rec	100	1/11/2021 1:08:16 PM	B74546
Surr: Toluene-d8	109	70-130		%Rec	100	1/11/2021 1:08:16 PM	B74546
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	100	1/11/2021 1:08:16 PM	B74546

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

<b>Qualifiers:</b>	*	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
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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Page 2 of 5





## ANALYTICAL SUMMARY REPORT

January 20, 2021

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

Work Order: B21010686  
Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 1 sample for Hall Environmental on 1/12/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B21010686-001	2101332-001B, SVE Influent	01/08/21 11:35	01/12/21	Air	Natural Gas Analysis

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 Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative. 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:



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

Billings, MT 800.735.4489 • Casper, WY 888.235.0515  
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Hall Environmental  
**Project:** Not Indicated  
**Lab ID:** B21010686-001  
**Client Sample ID:** 2101332-001B, SVE Influent

**Report Date:** 01/20/21  
**Collection Date:** 01/08/21 11:35  
**DateReceived:** 01/12/21  
**Matrix:** Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>GAS CHROMATOGRAPHY ANALYSIS REPORT</b>							
Oxygen	20.81	Mol %		0.01		GPA 2261-95	01/15/21 10:33 / jrj
Carbon Dioxide	0.88	Mol %		0.01		GPA 2261-95	01/15/21 10:33 / jrj

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

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



Trust our People. Trust our Data.  
www.energylab.comBillings, MT 800.735.4489 • Casper, WY 888.233.0515  
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

## QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental

Work Order: B21010686

Report Date: 01/20/21

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: GPA 2261-95</b>										Batch: R354925
<b>Lab ID: B21010686-001ADUP</b> 2 Sample Duplicate										
						Run: GCNGA-B_210115A		01/15/21 11:04		
Oxygen		20.8	Mol %	0.01				0.0	20	
Carbon Dioxide		0.89	Mol %	0.01				1.1	20	
<b>Lab ID: LCS011521</b> 2 Laboratory Control Sample										
						Run: GCNGA-B_210115A		01/15/21 14:21		
Oxygen		0.59	Mol %	0.01	118	70	130			
Carbon Dioxide		1.00	Mol %	0.01	101	70	130			

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

## Work Order Receipt Checklist

Hall Environmental

B21010686

Login completed by: Richard L. Shular

Date Received: 1/12/2021

Reviewed by: BL2000\gmccartney

Received by: tae

Reviewed Date: 1/13/2021

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:	13.9°C No Ice		
Water - VOA vials have zero headspace?	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.

Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

### Contact and Corrective Action Comments:

None



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Hall Environmental Analysis Laboratory  
4001 Hawkins NE  
Albuquerque NM 87109  
TEL 505-345-3975  
FAX 505-345-4107  
Website: clients.hallenvironmental.com

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

ANALYTICAL COMMENTS

1 2101332-001B SVE Influent 1/8/2021 11:35:00 AM Air TEDLAR 1 Fixed Gases-O2 and CO2 321010686-001

# CONTAINERS

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	gm	Date	1/8/2021	Time	3:27 PM	Received By		Date		Time		REPORT TRANSMITTAL DESIRED		
Relinquished By		Date		Time		Received By		Date		Time		HARD COPY EXTRA COST	FAX	EMAIL
Relinquished By		Date		Time		Received By		Date		Time		FOR LAB USE ONLY		
TAT												Temp of samples		Attempt to Cool
												Comments		



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2101332

20-Jan-21

Client: Animas Environmental Services

Project: Trunk S

Sample ID: <b>2101332-001a dup</b>		SampType: <b>DUP</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID: <b>SVE Influent</b>		Batch ID: <b>B74546</b>		RunNo: <b>74546</b>						
Prep Date:		Analysis Date: <b>1/11/2021</b>		SeqNo: <b>2631553</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	76	10						0.786	20	
Toluene	330	10						4.87	20	
Ethylbenzene	11	10						16.5	20	
Methyl tert-butyl ether (MTBE)	ND	10						0	20	
1,2,4-Trimethylbenzene	ND	10						0	20	
1,3,5-Trimethylbenzene	ND	10						0	20	
1,2-Dichloroethane (EDC)	ND	10						0	20	
1,2-Dibromoethane (EDB)	ND	10						0	20	
Naphthalene	ND	20						0	20	
1-Methylnaphthalene	ND	40						0	20	
2-Methylnaphthalene	ND	40						0	20	
Acetone	ND	100						0	20	
Bromobenzene	ND	10						0	20	
Bromodichloromethane	ND	10						0	20	
Bromoform	ND	10						0	20	
Bromomethane	ND	20						0	20	
2-Butanone	ND	100						0	20	
Carbon disulfide	ND	100						0	20	
Carbon tetrachloride	ND	10						0	20	
Chlorobenzene	ND	10						0	20	
Chloroethane	ND	20						0	20	
Chloroform	ND	10						0	20	
Chloromethane	ND	10						0	20	
2-Chlorotoluene	ND	10						0	20	
4-Chlorotoluene	ND	10						0	20	
cis-1,2-DCE	ND	10						0	20	
cis-1,3-Dichloropropene	ND	10						0	20	
1,2-Dibromo-3-chloropropane	ND	20						0	20	
Dibromochloromethane	ND	10						0	20	
Dibromomethane	ND	20						0	20	
1,2-Dichlorobenzene	ND	10						0	20	
1,3-Dichlorobenzene	ND	10						0	20	
1,4-Dichlorobenzene	ND	10						0	20	
Dichlorodifluoromethane	ND	10						0	20	
1,1-Dichloroethane	ND	10						0	20	
1,1-Dichloroethene	ND	10						0	20	
1,2-Dichloropropane	ND	10						0	20	
1,3-Dichloropropane	ND	10						0	20	
2,2-Dichloropropane	ND	10						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 Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

Page 3 of 5

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

WO#: 2101332

20-Jan-21

**Client:** Animas Environmental Services**Project:** Trunk S

Sample ID: <b>2101332-001a dup</b>		SampType: <b>DUP</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID: <b>SVE Influent</b>		Batch ID: <b>B74546</b>		RunNo: <b>74546</b>						
Prep Date:		Analysis Date: <b>1/11/2021</b>		SeqNo: <b>2631553</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	10						0	20	
Hexachlorobutadiene	ND	10						0	20	
2-Hexanone	ND	100						0	20	
Isopropylbenzene	ND	10						0	20	
4-Isopropyltoluene	ND	10						0	20	
4-Methyl-2-pentanone	ND	100						0	20	
Methylene chloride	ND	30						0	20	
n-Butylbenzene	ND	30						0	20	
n-Propylbenzene	ND	10						0	20	
sec-Butylbenzene	ND	10						0	20	
Styrene	ND	10						0	20	
tert-Butylbenzene	ND	10						0	20	
1,1,1,2-Tetrachloroethane	ND	10						0	20	
1,1,2,2-Tetrachloroethane	ND	10						0	20	
Tetrachloroethene (PCE)	ND	10						0	20	
trans-1,2-DCE	ND	10						0	20	
trans-1,3-Dichloropropene	ND	10						0	20	
1,2,3-Trichlorobenzene	ND	10						0	20	
1,2,4-Trichlorobenzene	ND	10						0	20	
1,1,1-Trichloroethane	ND	10						0	20	
1,1,2-Trichloroethane	ND	10						0	20	
Trichloroethene (TCE)	ND	10						0	20	
Trichlorofluoromethane	ND	10						0	20	
1,2,3-Trichloropropane	ND	20						0	20	
Vinyl chloride	ND	10						0	20	
Xylenes, Total	160	15						10.6	20	
Surr: Dibromofluoromethane	57		100.0		57.5	70	130	0	0	S
Surr: 1,2-Dichloroethane-d4	57		100.0		57.5	70	130	0	0	S
Surr: Toluene-d8	110		100.0		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		104	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 Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

Page 4 of 5

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2101332

20-Jan-21

Client: Animas Environmental Services

Project: Trunk S

Sample ID: 2101332-001a dup		SampType: DUP		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SVE Influent		Batch ID: D74546		RunNo: 74546						
Prep Date:		Analysis Date: 1/11/2021		SeqNo: 2631588		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41000	500						7.45	20	
Surr: BFB	86000		100000		85.9	70	130	0	0	

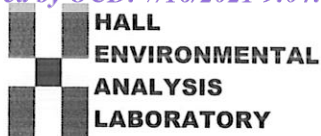
### Qualifiers:

\* 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 Quantitative Limit  
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B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

Page 5 of 5





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

## Sample Log-In Check List

Client Name: **Animas Environmental Services**

Work Order Number: **2101332**

RcptNo: 1

Received By: **Juan Rojas**

1/8/2021 3:15:00 PM

*[Signature]*

Completed By: **Emily Mocho**

1/8/2021 3:23:27 PM

Reviewed By: *[Signature]* 1-8-21

### Chain of Custody

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

### 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: *JR 1/8/21*

### 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

## Chain-of-Custody Record

Client: Almas Environmental ServicesMailing Address: 624 E. Comanche St.

Tomball, NM 87499

Phone #: 505 544 2281

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Trunk S

Project #:

Project Manager:

Eddie Hubbard

Sampler:

On Ice: ☐ Yes ☒ No# of Coolers: 1Cooler Temp (including CF): N/A (°C)

Container Type and #

2-tedlar

Preservative Type

001

HEAL No.

2101332

## Analysis Request

BTX / 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<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

CO<sub>2</sub>CO<sub>2</sub>

Remarks:

Direct Bill to Harvest

Received by:

[Signature]

Date

18/21 15:15

Via:

CDO

Relinquished by:

[Signature]

Time:

18/21 15:15

Date:

18/21 15:15

Relinquished by:

[Signature]

Time:

18/21 15:15

Date:

18/21 15:15

**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 25066

**CONDITIONS**

Operator: Harvest Four Corners, LLC 1111 Travis Street Houston, TX 77002	OGRID: 373888
	Action Number: 25066
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Accepted for the record. See app ID 129947 for most updated status.	10/18/2022