



August 18, 2021

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

Submitted via NMOCD Online Portal

**RE: Q2 2021 Periodic Progress Report
Trunk S Release (April-July 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 Q2 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 April through July 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 Operations and Maintenance (O&M) – 2nd Quarter 2021

2.1 SVE O&M

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

624 E. Comanche St., Farmington, NM 87401
PO Box 8, Farmington NM 87499
505-564-2281
www.animasenvironmental.com

Cory Smith NMOCD
Harvest Trunk S Release (3RP-1014; Incident #1931842879)
August 18, 2021; Page 2 of 5

- April 9, 2021
- June 17, 2021
- July 12, 2021

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, samples of the influent vapor stream were collected on April 9 and July 12, 2021, for laboratory analysis. For each sampling event, 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.

Other maintenance activities include the following:

- GAC changeouts were completed on April 9 and July 12, 2021; and
- At the July 12, 2021, site visit, AES took OVM measurements from all five SVE zones. OVM readings from Zones 4 and 5 were less than 100 parts per million (ppm), indicating that VOC concentrations have decreased sharply in those two zones. Zones 4 and 5 were shut off to pulse remediation operations and to increase the vacuum in the remaining zones. Zones 1, 2, and 3 remained under an applied vacuum.

2.2 Laboratory Analytical Results

Laboratory analytical results show that SVE influent in July 2021 included:

- 19,000 micrograms per liter ($\mu\text{g}/\text{L}$) of total petroleum hydrocarbons (TPH)- GRO;
- 33 $\mu\text{g}/\text{L}$ benzene;
- 150 $\mu\text{g}/\text{L}$ toluene;
- 12 $\mu\text{g}/\text{L}$ ethylbenzene;
- 210 $\mu\text{g}/\text{L}$ xylenes;
- 21.465% oxygen;
- 77.940% nitrogen; and
- 0.491% carbon dioxide.

Cory Smith NMOCD
Harvest Trunk S Release (3RP-1014; Incident #1931842879)
August 18, 2021; Page 3 of 5

GRO concentrations in SVE influent flow have decreased by 90.5% since the system began operations in July 2020. Additionally, carbon dioxide concentrations are also decreasing over time, indicating the movement of air into the subsurface area of contamination, which are typically characterized by low oxygen and elevated carbon dioxide. Laboratory analytical data are included in Table 1, and the laboratory analytical reports are attached.

3.0 Operational Data and Petroleum Mass Removal - 2nd Quarter 2021

On April 16, 2021, the data telemetry reporting the cloud-based storage server was disrupted. Therefore, runtime hours, inlet vacuum pressures, and flow rates have been estimated based on previous operational data and field measurements. Based on data through April 16, 2021, estimates of runtime from April 17 through July 12, 2021, field readings, and analytical data through from the two sampling events, the following SVE operations summary through July 12, 2021, are presented below:

<i>Trunk S Solar SVE System Operations Summary</i>	
<i>Total SVE system operating hours since system startup (hrs)</i>	4,535
<i>Most recent event SVE system influent PID-OVM reading (ppm)</i>	859
<i>Most recent event Inlet Vacuum (inH2o)</i>	-21
<i>Most recent event Actual Flow Rate (acfm)</i>	123
<i>Total cumulative standard volume processed since system startup (ft³)</i>	22,699,234
<i>Total estimated petroleum mass removal since system startup (lbs)</i>	73,894
<i>Estimated lbs removed/std ft³ for current reporting period (lbs/std ft³)</i>	0.0012

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 2, and Graph 1 shows remediation progress through July 12, 2021.

Cory Smith NMOCD
Harvest Trunk S Release (3RP-1014; Incident #1931842879)
August 18, 2021; Page 4 of 5

4.0 Ongoing SVE System Monitoring and Sampling

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

- 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:

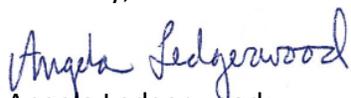
- Summary of remediation activity for the quarter;
- SVE run time, SVE operating parameters, and petroleum hydrocarbon mass removal;
- Gas sample analytical data; and
- Documentation of replacement of GAC canisters.

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.

If you have any questions about site conditions, SVE operations, or this report, please do not hesitate to contact Angela Ledgerwood at (720) 537-6650 or Elizabeth McNally at (505) 564-2281.

Sincerely,



Angela Ledgerwood
Senior Project Manager



Elizabeth McNally, P.E.
Principal

Cory Smith NMOCD
Harvest Trunk S Release (3RP-1014; Incident #1931842879)
August 18, 2021; Page 5 of 5

Attachments:

Table 1. AVE Vapor Laboratory Analytical Results
Table 2. SVE Field Operating Parameters and Mass Removal
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 –
 April 9, 2021 Vapor Sampling (Hall No. 2104471)
 July 12, 2021 Vapor Sampling (Hall No. 2107597)

Cc:

Monica Smith
Harvest Midstream Company
Electronic Mail: msmith@harvestmidstream.com

Jennifer Deal
Harvest Midstream Company
Electronic Mail: jdeal@harvestmidstream.com

TABLE 1
SVE VAPOR LABORATORY ANALYTICAL RESULTS
Harvest Trunk S
Release 3RP-1014, Incident #NCS1931842879

<i>Date</i>	<i>Benzene μg/L</i>	<i>Toluene μg/L</i>	<i>Ethyl- benzene μg/L</i>	<i>Totals Xylenes μg/L</i>	<i>GRO μg/L</i>	<i>O₂ Mol %</i>	<i>CO₂ Mol %</i>
16-Jul-20	1,700	1,570	29.4	517.9	NS	20.2	0.671
3-Sep-20	45	220	22	230	NS	NS	NS
30-Sep-20	49	480	86	770	NS	NS	NS
14-Oct-20	150	460	15	270	68,000	20.939	0.928
8-Jan-21	76	310	9.1	150	38,000	20.810	0.880
9-Apr-21	50	160	8.2	140	30,000	21.541	0.485
12-Jul-21	33	150	12	210	19,000	21.465	0.491

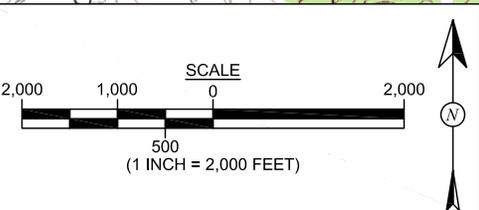
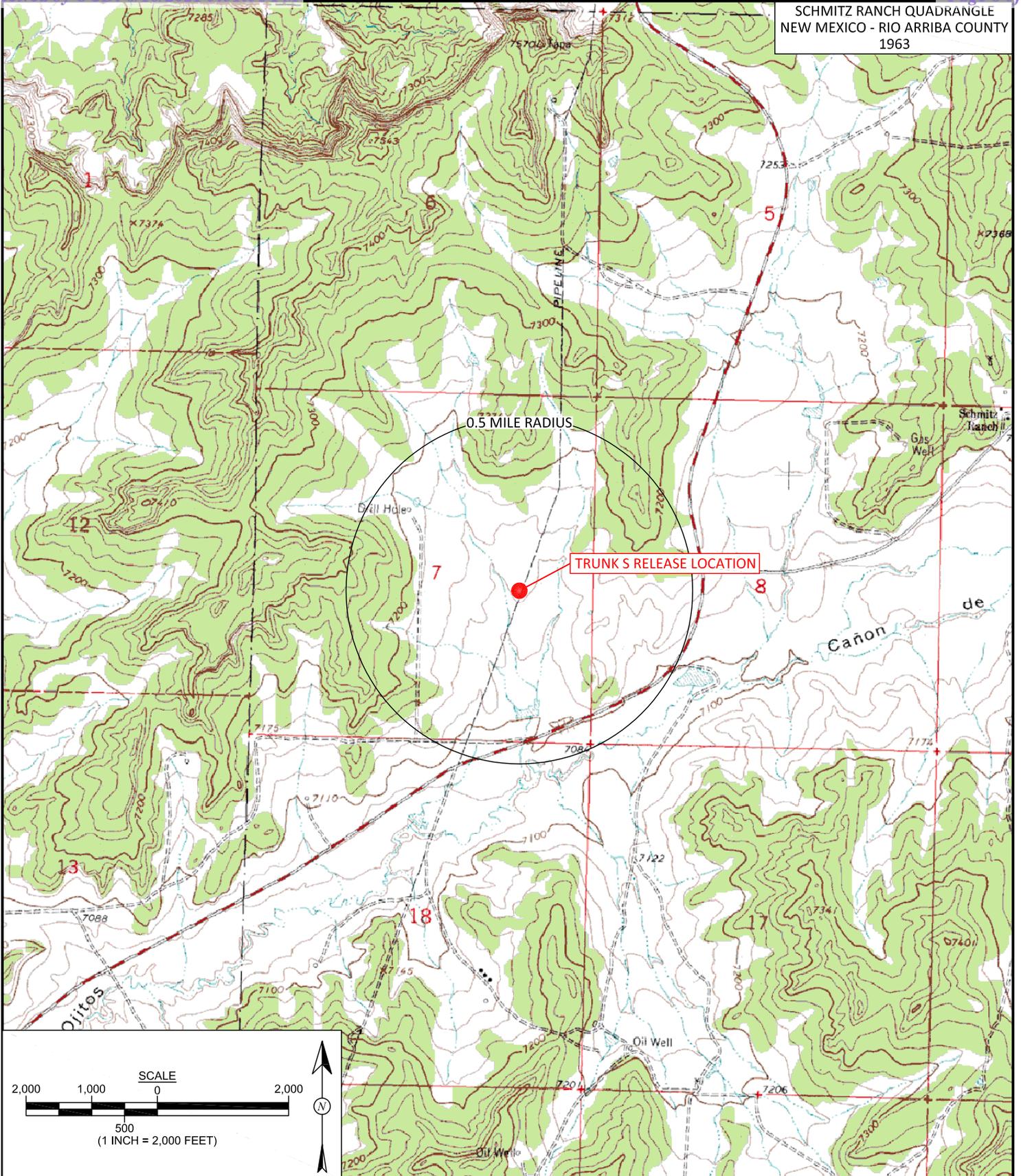
TABLE 2
SVE FIELD OPERATING PARAMETERS and
MASS REMOVAL
Harvest Trunk S
Release 3RP-1014, Incident #NCS1931842879

Date	Operating Days	Telemetry Operating Hours Reading	Field PID-OVM (ppmv)	Telemetry Inlet Vacuum (in. H ₂ O)	Calculated Inlet Vacuum (in. Hg)	Field Inlet Temp. (°F)	Field Outlet Temp. (°F)	Telemetry Actual Flow Rate (acfm) ⁷	Telemetry Converted to Standard Flow Rate (scfm)	Total Standard Volume (ft ³)	VOCs (GRO) (ug/L)	VOCs (GRO) Removed (lbs/ Δt)	lbs removed/ std ft ³
16-Jul-20	0	322	4,268	-12	-0.883	NM	NM	120	88	--	200,000	--	--
3-Sep-20	49	963	1,100	-16	-1.177	NM	NM	119	86	3,346,020	54,357	13,247	0.0040
30-Sep-20	76	1,298	1,200	-16	-1.177	NM	153	120	87	1,738,650	59,000	6,135	0.0035
14-Oct-20	90	1,450	1,357	-20	-1.471	NM	NM	122	86	788,880	68,000	3,119	0.0040
23-Nov-20	130	1,847	2,033	-17	-1.250	54	62	124	92	2,119,980	NM	--	--
8-Jan-21	176	2,275	786	-28	-2.060	50	60	131	94	2,388,240	38,000	20,209	0.0045
5-Feb-21	204	2,543	763	-20	-1.471	36	44	129	96	1,527,600	NM	--	--
10-Mar-21	237	2,891	433	-20	-1.471	50	58	128	93	1,973,160	NM	--	--
9-Apr-21	267	3,246	898	-17	-1.250	62	78	124	92	1,970,250	30,000	16,691	0.0042
16-Apr-21	274	3,334	NM	-21	-1.545	NM	NM	123	90	480,480	NM	--	--
17-Jun-21	336	4,182	772	-19	-1.398	94	100	124	87	4,501,712	NM	--	--
12-Jul-21	361	4,535	859	-19	-1.398	86	94	124	89	1,864,262	19,000	14,493	0.0012
Cumulative Flow										22,699,234		73,894	total lbs removed

Notes:

1. PID - photoionization detector; OVM - organic vapor meter
2. ppmv - parts per million by volume (v/v; equivalent to mL/L or mL/m³)
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

SCHMITZ RANCH QUADRANGLE
 NEW MEXICO - RIO ARRIBA COUNTY
 1963



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
 NE¼ SE¼, SEC. 7, T25N, R3W
 RIO ARRIBA COUNTY, NEW MEXICO
 N36.41180, -107.18085



**animas
 environmental
 services**
 Farmington, NM • Durango, CO
 animasenvironmental.com

SVE UNIT AND GAC DRUM SETUP

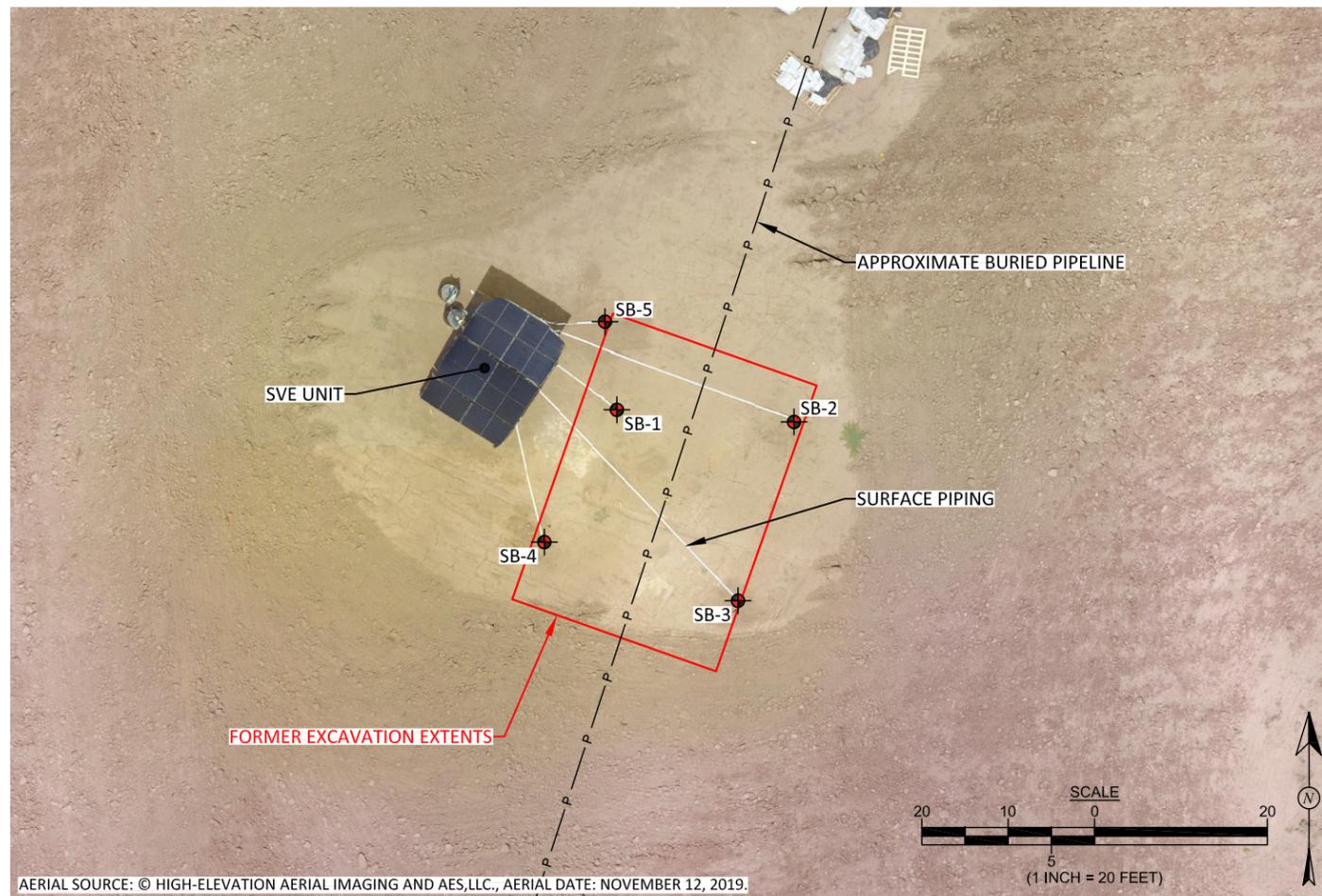
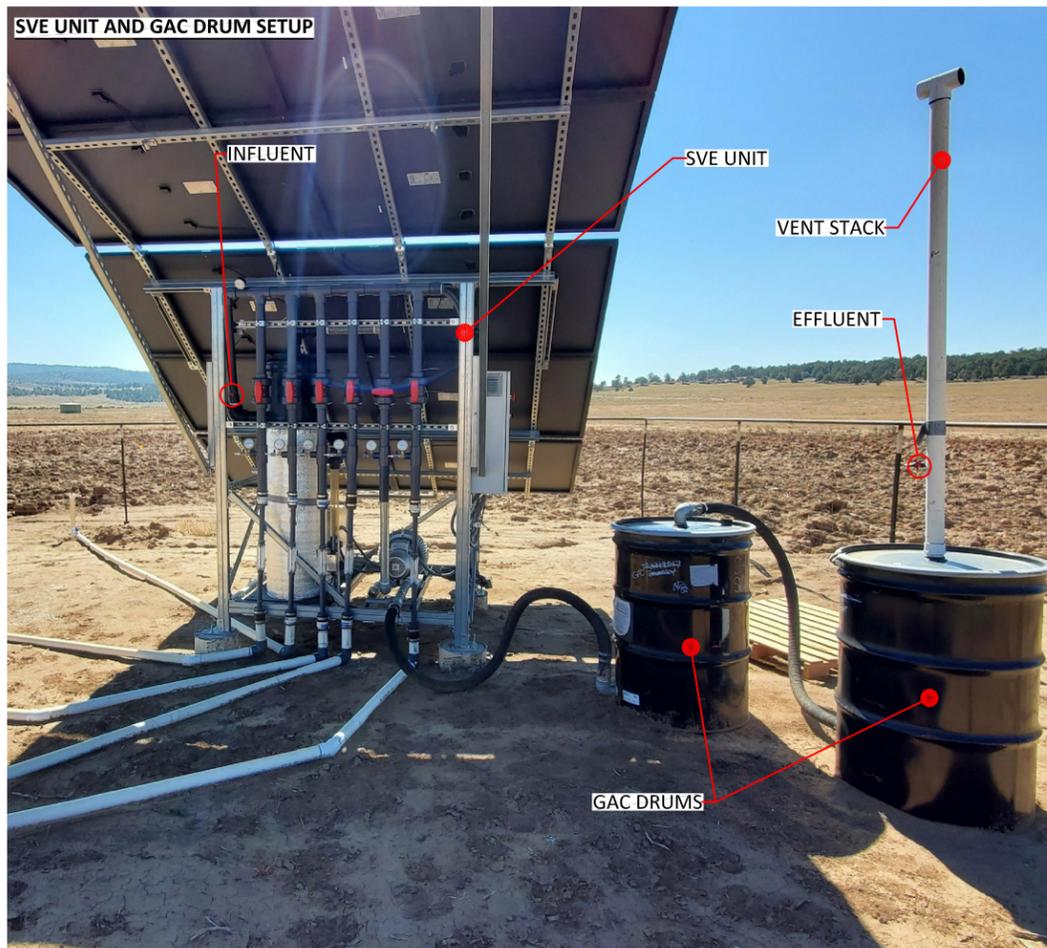


FIGURE 2

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

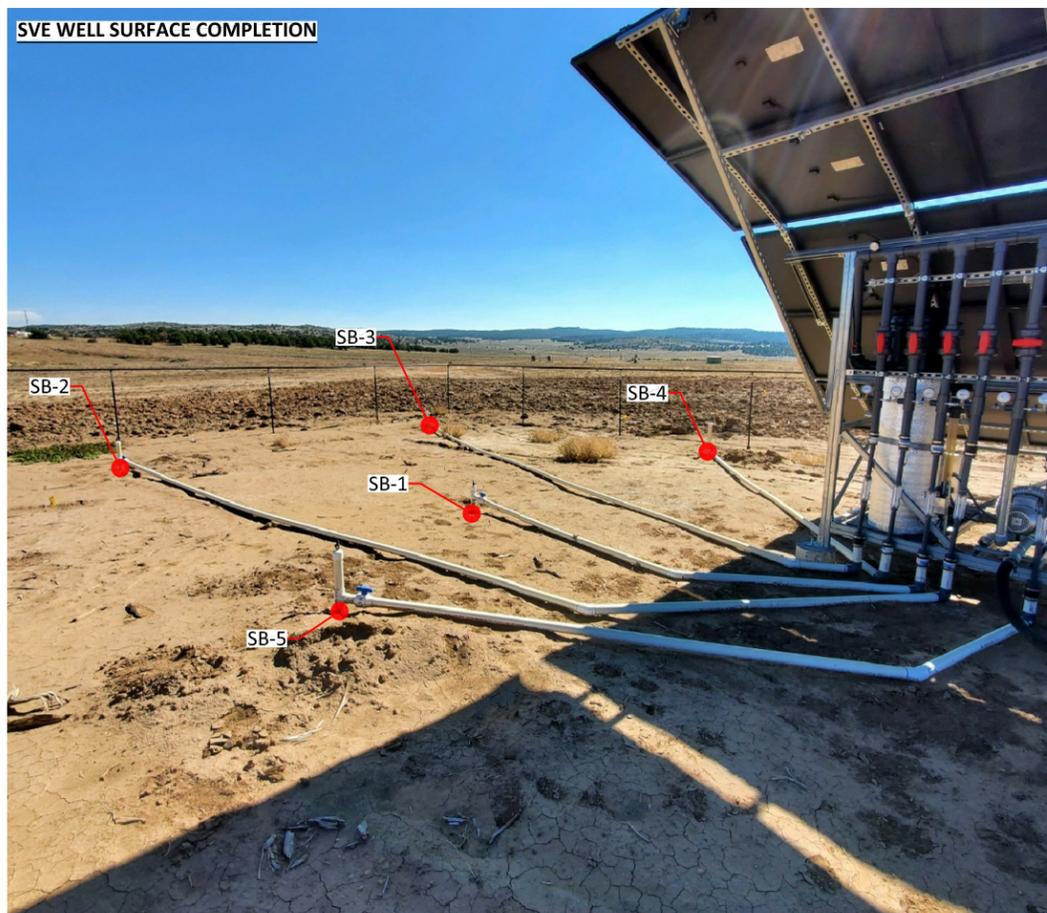


DRAWN BY: C. Lameman	DATE DRAWN: August 3, 2020
REVISIONS BY: C. Lameman	DATE REVISED: October 22, 2020
CHECKED BY: E. McNally	DATE CHECKED: October 22, 2020
APPROVED BY: E. McNally	DATE APPROVED: October 22, 2020

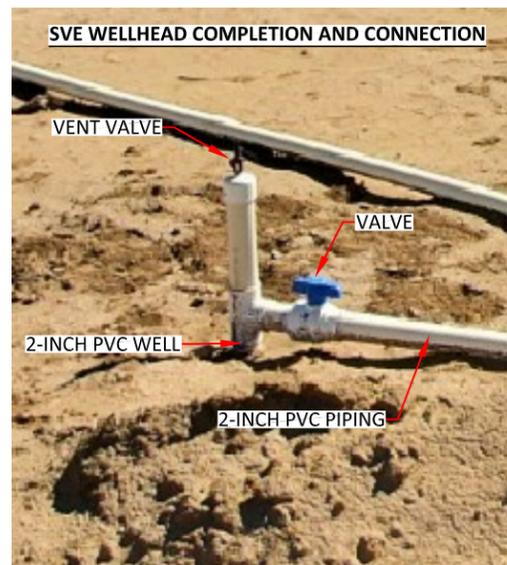
LEGEND

SOIL VAPOR EXTRACTION WELL

SVE WELL SURFACE COMPLETION

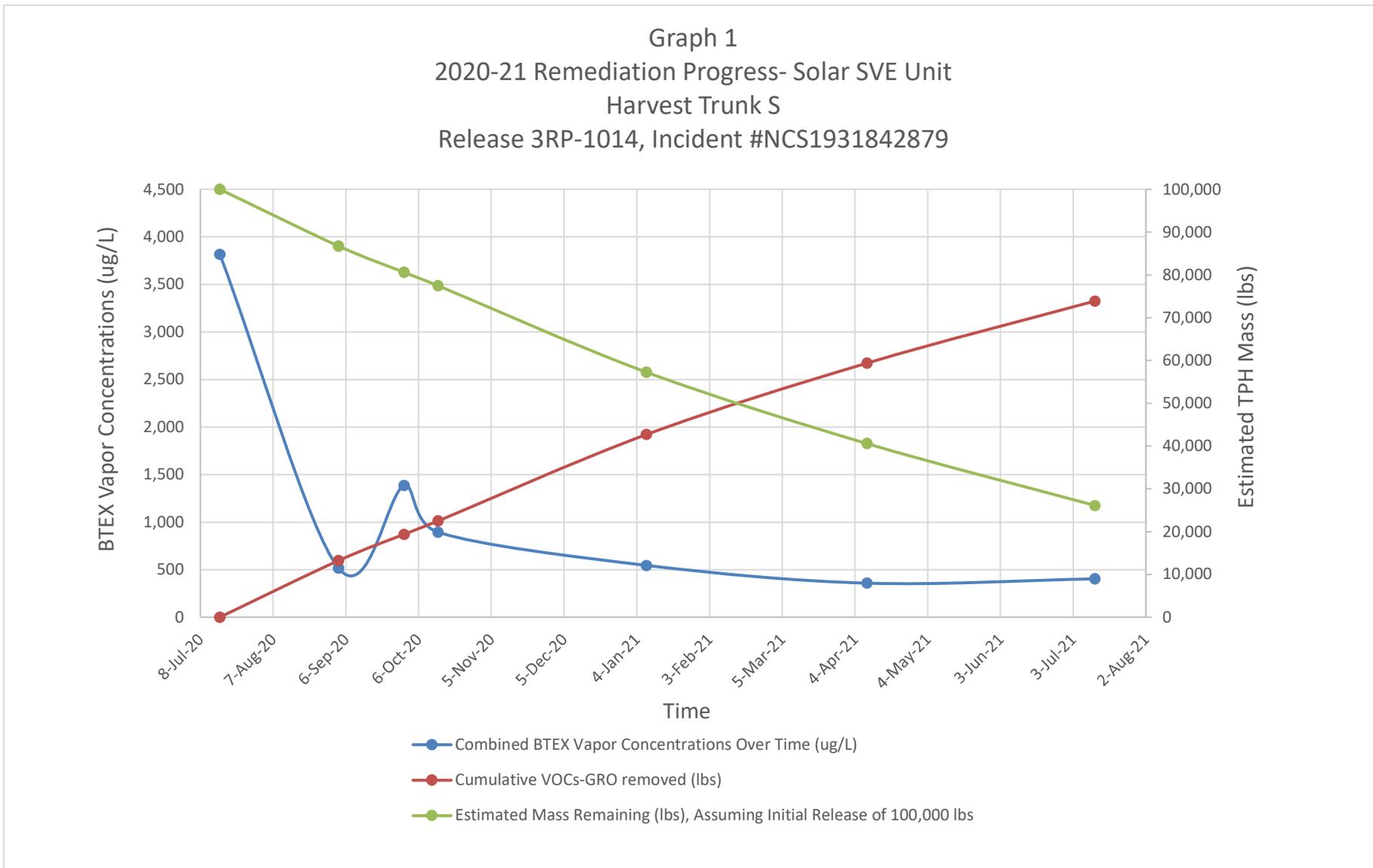


SVE WELLHEAD COMPLETION AND CONNECTION



SYSTEM MANIFOLD







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

May 11, 2021

Eddie Hubbert
Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL: (505) 564-2281
FAX: (505) 324-2022

RE: Trunks

OrderNo.: 2104471

Dear Eddie Hubbert:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/9/2021 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 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2104471**

Date Reported: **5/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunks

Collection Date: 4/9/2021 11:40:00 AM

Lab ID: 2104471-001

Matrix: AIR

Received Date: 4/9/2021 2:56:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	30000	250		µg/L	50	4/12/2021 9:35:48 AM	G76615
Surr: BFB	290	37.3-213	S	%Rec	50	4/12/2021 9:35:48 AM	G76615
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	50	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Toluene	160	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Ethylbenzene	8.2	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2,4-Trimethylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,3,5-Trimethylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Naphthalene	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
1-Methylnaphthalene	ND	20		µg/L	50	4/15/2021 12:18:55 PM	A76723
2-Methylnaphthalene	ND	20		µg/L	50	4/15/2021 12:18:55 PM	A76723
Acetone	ND	50		µg/L	50	4/15/2021 12:18:55 PM	A76723
Bromobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Bromodichloromethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Bromoform	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Bromomethane	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
2-Butanone	ND	50		µg/L	50	4/15/2021 12:18:55 PM	A76723
Carbon disulfide	ND	50		µg/L	50	4/15/2021 12:18:55 PM	A76723
Carbon tetrachloride	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Chlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Chloroethane	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
Chloroform	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Chloromethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
2-Chlorotoluene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
4-Chlorotoluene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
cis-1,2-DCE	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
Dibromochloromethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Dibromomethane	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2-Dichlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,3-Dichlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,4-Dichlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Dichlorodifluoromethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1-Dichloroethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1-Dichloroethene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723

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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 2104471

Date Reported: 5/11/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunks

Collection Date: 4/9/2021 11:40:00 AM

Lab ID: 2104471-001

Matrix: AIR

Received Date: 4/9/2021 2:56:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,2-Dichloropropane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,3-Dichloropropane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
2,2-Dichloropropane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1-Dichloropropene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Hexachlorobutadiene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
2-Hexanone	ND	50		µg/L	50	4/15/2021 12:18:55 PM	A76723
Isopropylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
4-Isopropyltoluene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
4-Methyl-2-pentanone	ND	50		µg/L	50	4/15/2021 12:18:55 PM	A76723
Methylene chloride	ND	15		µg/L	50	4/15/2021 12:18:55 PM	A76723
n-Butylbenzene	ND	15		µg/L	50	4/15/2021 12:18:55 PM	A76723
n-Propylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
sec-Butylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Styrene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
tert-Butylbenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Tetrachloroethene (PCE)	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
trans-1,2-DCE	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1,1-Trichloroethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,1,2-Trichloroethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Trichloroethene (TCE)	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Trichlorofluoromethane	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
1,2,3-Trichloropropane	ND	10		µg/L	50	4/15/2021 12:18:55 PM	A76723
Vinyl chloride	ND	5.0		µg/L	50	4/15/2021 12:18:55 PM	A76723
Xylenes, Total	140	7.5		µg/L	50	4/15/2021 12:18:55 PM	A76723
Surr: Dibromofluoromethane	83.8	70-130		%Rec	50	4/15/2021 12:18:55 PM	A76723
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%Rec	50	4/15/2021 12:18:55 PM	A76723
Surr: Toluene-d8	116	70-130		%Rec	50	4/15/2021 12:18:55 PM	A76723
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	50	4/15/2021 12:18:55 PM	A76723

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	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Page 2 of 2



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

Billings, MT 800.735.4489 • Casper, WY 888.235.051
Gillette, WY 866.686.7175 • Helena, MT 877.472.071

ANALYTICAL SUMMARY REPORT

April 19, 2021

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

Work Order: G21040289
Project Name: Not Indicated

Energy Laboratories Inc. Gillette WY received the following 1 sample for Hall Environmental on 4/13/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
G21040289-001	2104471-001B; SVE Influent	04/09/21 11:40	04/13/21	Gas	Natural Gas Analysis - BTU Natural Gas Analysis - Compressibility Factor Natural Gas Analysis - GPM Natural Gas Analysis - Molecular Weight Natural Gas Analysis - Routine Natural Gas Analysis - Pressure Base Natural Gas Analysis - Psuedo-Critical Pressure Natural Gas Analysis - Psuedo-Critical Temperature Natural Gas Analysis - Specific Gravity Natural Gas Analysis - Temperature Base

The analyses presented in this report were performed by Energy Laboratories, Inc., 400 W. Boxelder Rd., Gillette, WY 82718, unless otherwise noted. Any exceptions or problems with the analyses are noted in the 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 tests 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 Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 2104471-001B; SVE Influent
Location:
Lab ID: G21040289-001

Report Date: 04/19/21
Collection Date: 04/09/21 11:40
Date Received: 04/13/21
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
----------	--------	-------	-----------	--------	--------------------

NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT

Oxygen	21.541	Mol %		GPA 2261	04/16/21 10:04 / djb
Nitrogen	77.799	Mol %		GPA 2261	04/16/21 10:04 / djb
Carbon Dioxide	0.485	Mol %		GPA 2261	04/16/21 10:04 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	04/16/21 10:04 / djb
Methane	< 0.001	Mol %		GPA 2261	04/16/21 10:04 / djb
Ethane	0.003	Mol %		GPA 2261	04/16/21 10:04 / djb
Propane	< 0.001	Mol %		GPA 2261	04/16/21 10:04 / djb
Isobutane	0.002	Mol %		GPA 2261	04/16/21 10:04 / djb
n-Butane	0.004	Mol %		GPA 2261	04/16/21 10:04 / djb
Isopentane	0.008	Mol %		GPA 2261	04/16/21 10:04 / djb
n-Pentane	0.007	Mol %		GPA 2261	04/16/21 10:04 / djb
Hexanes plus	0.151	Mol %		GPA 2261	04/16/21 10:04 / djb

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

GPM Ethane	0.0010	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Isobutane	0.0010	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM n-Butane	0.0010	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Isopentane	0.0030	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM n-Pentane	0.0030	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Hexanes plus	0.0660	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Pentanes plus	0.0710	gal/MCF		GPA 2261	04/16/21 10:04 / djb
GPM Total	0.0740	gal/MCF		GPA 2261	04/16/21 10:04 / djb

CALCULATED PROPERTIES

Calculation Pressure Base	14.730	psia		GPA 2261	04/16/21 10:04 / djb
Calculation Temperature Base	60	°F		GPA 2261	04/16/21 10:04 / djb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	04/16/21 10:04 / djb
Molecular Weight	29.05	unitless		GPA 2261	04/16/21 10:04 / djb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	04/16/21 10:04 / djb
Pseudo-critical Temperature, deg R	241	deg R		GPA 2261	04/16/21 10:04 / djb
Specific Gravity (air=1.000)	1.006	unitless		GPA 2261	04/16/21 10:04 / djb
Gross BTU per cu ft @ std cond, dry	8.65	BTU/cu ft		GPA 2261	04/16/21 10:04 / djb
Gross BTU per cu ft @ std cond, wet	8.50	BTU/cu ft		GPA 2261	04/16/21 10:04 / djb

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

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



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

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental

Work Order: G21040289

Report Date: 04/19/21

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261								Analytical Run: R263741		
Lab ID: ICV-2104160906	12 Initial Calibration Verification Standard							04/16/21 09:06		
Oxygen		0.396	Mol %	0.001	99	75	110			
Nitrogen		5.137	Mol %	0.001	102	90	110			
Carbon Dioxide		4.902	Mol %	0.001	99	90	110			
Hydrogen Sulfide		0.126	Mol %	0.001	127	100	136			
Methane		73.200	Mol %	0.001	100	90	110			
Ethane		5.003	Mol %	0.001	101	90	110			
Propane		5.005	Mol %	0.001	100	90	110			
Isobutane		1.983	Mol %	0.001	99	90	110			
n-Butane		1.964	Mol %	0.001	98	90	110			
Isopentane		0.983	Mol %	0.001	98	90	110			
n-Pentane		0.994	Mol %	0.001	99	90	110			
Hexanes plus		0.307	Mol %	0.001	102	90	110			
Lab ID: CCV-2104160914	12 Continuing Calibration Verification Standard							04/16/21 09:15		
Oxygen		0.606	Mol %	0.001	101	90	110			
Nitrogen		1.281	Mol %	0.001	92	85	110			
Carbon Dioxide		0.954	Mol %	0.001	95	90	110			
Hydrogen Sulfide		0.030	Mol %	0.001	120	70	130			
Methane		93.554	Mol %	0.001	100	90	110			
Ethane		1.016	Mol %	0.001	102	90	110			
Propane		1.011	Mol %	0.001	101	90	110			
Isobutane		0.496	Mol %	0.001	99	90	110			
n-Butane		0.496	Mol %	0.001	99	90	110			
Isopentane		0.200	Mol %	0.001	100	90	110			
n-Pentane		0.201	Mol %	0.001	100	90	110			
Hexanes plus		0.155	Mol %	0.001	103	90	110			
Lab ID: CCV-2104161027	12 Continuing Calibration Verification Standard							04/16/21 10:28		
Oxygen		0.616	Mol %	0.001	103	90	110			
Nitrogen		1.323	Mol %	0.001	95	85	110			
Carbon Dioxide		0.953	Mol %	0.001	95	90	110			
Hydrogen Sulfide		0.031	Mol %	0.001	124	70	130			
Methane		93.514	Mol %	0.001	100	90	110			
Ethane		1.013	Mol %	0.001	101	90	110			
Propane		1.008	Mol %	0.001	101	90	110			
Isobutane		0.495	Mol %	0.001	99	90	110			
n-Butane		0.494	Mol %	0.001	99	90	110			
Isopentane		0.199	Mol %	0.001	100	90	110			
n-Pentane		0.200	Mol %	0.001	100	90	110			
Hexanes plus		0.154	Mol %	0.001	103	90	110			
Method: GPA 2261								Batch: R263741		
Lab ID: G21040289-001ADUP	12 Sample Duplicate				Run: Varian GC_210416A			04/16/21 10:09		
Oxygen		21.541	Mol %	0.001				0.0	10	
Nitrogen		77.802	Mol %	0.001				0.0	10	
Carbon Dioxide		0.485	Mol %	0.001				0.0	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental

Work Order: G21040289

Report Date: 04/19/21

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: GPA 2261								Batch: R263741			
Lab ID: G21040289-001ADUP 12 Sample Duplicate								Run: Varian GC_210416A			04/16/21 10:09
Hydrogen Sulfide		< 0.001	Mol %	0.001						10	
Methane		< 0.001	Mol %	0.001						10	
Ethane		0.003	Mol %	0.001				0.0		10	
Propane		< 0.001	Mol %	0.001						10	
Isobutane		0.002	Mol %	0.001				0.0		10	
n-Butane		0.004	Mol %	0.001				0.0		10	
Isopentane		0.008	Mol %	0.001				0.0		10	
n-Pentane		0.007	Mol %	0.001				0.0		10	
Hexanes plus		0.148	Mol %	0.001				2.0		10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

Work Order Receipt Checklist

Hall Environmental

G21040289

Login completed by: Chantel S. Johnson

Date Received: 4/13/2021

Reviewed by: Misty Stephens

Received by: csj

Reviewed Date: 4/14/2021

Carrier name: FedEx

- 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: °C
- Water - VOA vials have zero headspace? 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.

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

Contact and Corrective Action Comments:

None



CHAIN OF CUSTODY RECORD PAGE: 1 OF 1

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

Form containing client information: Energy Labs-Gillette, Energy Laboratories, 400 W Boxelder Rd, Gillette, WY 82718. Includes a table with columns: ITEM, SAMPLE, CLIENT SAMPLE ID, BOTTLE TYPE, MATRIX, COLLECTION DATE, # CONTAINERS, ANALYTICAL COMMENTS. Row 1: 1, 2104471-001B, SVE Influent, TEDLAR, Air, 4/9/2021 11:40:00 AM, 1, CO2 + O2

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.

Handwritten ID: C-21040289

Form for sample handoff and reporting. Includes fields for Relinquished By (SGC), Received By (Charlotte Johnson), Date/Time (4/9/2021 4:23 PM, 4/13/2021 10:00), and reporting options (Standard checked, RUSH, Next BD, 2nd BD, 3rd BD). Includes 'REPORT TRANSMITTAL DESIRED' section with checkboxes for HARD COPY, FAX, EMAIL, ONLINE. Includes 'FOR LAB USE ONLY' section with 'Temp of samples' and 'Attempt to Cool?' fields.



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: 2104471

RcptNo: 1

Received By: Scott Anderson 4/9/2021 2:56:00 PM

Completed By: Sean Livingston 4/9/2021 4:01:41 PM

Reviewed By: DAD 4/9/21

Handwritten signature: Sean Livingston

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Client

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: [signature] 4/9/21

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 23.6, Good, [], [], []



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

July 22, 2021

Eddie Hubbert
Animas Environmental Services
624 E. Comanche
Farmington, NM 87401
TEL: (505) 564-2281
FAX (505) 324-2022

RE: Trunk S

OrderNo.: 2107597

Dear Eddie Hubbert:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/13/2021 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 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2107597

Date Reported: 7/22/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunk S

Collection Date: 7/12/2021 1:15:00 PM

Lab ID: 2107597-001

Matrix: AIR

Received Date: 7/13/2021 1:18:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	19000	250		µg/L	50	7/15/2021 2:36:56 PM	B79841
Surr: BFB	103	70-130		%Rec	50	7/15/2021 2:36:56 PM	B79841
EPA METHOD 8260B: VOLATILES							Analyst: JMR
Benzene	33	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Toluene	150	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Ethylbenzene	12	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2,4-Trimethylbenzene	7.1	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,3,5-Trimethylbenzene	9.1	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Naphthalene	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
1-Methylnaphthalene	ND	20		µg/L	50	7/15/2021 2:36:56 PM	A79841
2-Methylnaphthalene	ND	20		µg/L	50	7/15/2021 2:36:56 PM	A79841
Acetone	ND	50		µg/L	50	7/15/2021 2:36:56 PM	A79841
Bromobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Bromodichloromethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Bromoform	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Bromomethane	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
2-Butanone	ND	50		µg/L	50	7/15/2021 2:36:56 PM	A79841
Carbon disulfide	ND	50		µg/L	50	7/15/2021 2:36:56 PM	A79841
Carbon tetrachloride	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Chlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Chloroethane	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
Chloroform	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Chloromethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
2-Chlorotoluene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
4-Chlorotoluene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
cis-1,2-DCE	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
cis-1,3-Dichloropropene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2-Dibromo-3-chloropropane	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
Dibromochloromethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Dibromomethane	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2-Dichlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,3-Dichlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,4-Dichlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Dichlorodifluoromethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1-Dichloroethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1-Dichloroethene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841

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	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Page 1 of 2

Analytical Report

Lab Order 2107597

Date Reported: 7/22/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SVE Influent

Project: Trunk S

Collection Date: 7/12/2021 1:15:00 PM

Lab ID: 2107597-001

Matrix: AIR

Received Date: 7/13/2021 1:18:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JMR
1,2-Dichloropropane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,3-Dichloropropane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
2,2-Dichloropropane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1-Dichloropropene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Hexachlorobutadiene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
2-Hexanone	ND	50		µg/L	50	7/15/2021 2:36:56 PM	A79841
Isopropylbenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
4-Isopropyltoluene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
4-Methyl-2-pentanone	ND	50		µg/L	50	7/15/2021 2:36:56 PM	A79841
Methylene chloride	ND	15		µg/L	50	7/15/2021 2:36:56 PM	A79841
n-Butylbenzene	ND	15		µg/L	50	7/15/2021 2:36:56 PM	A79841
n-Propylbenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
sec-Butylbenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Styrene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
tert-Butylbenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Tetrachloroethene (PCE)	5.9	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
trans-1,2-DCE	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
trans-1,3-Dichloropropene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2,3-Trichlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2,4-Trichlorobenzene	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1,1-Trichloroethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,1,2-Trichloroethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Trichloroethene (TCE)	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Trichlorofluoromethane	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
1,2,3-Trichloropropane	ND	10		µg/L	50	7/15/2021 2:36:56 PM	A79841
Vinyl chloride	ND	5.0		µg/L	50	7/15/2021 2:36:56 PM	A79841
Xylenes, Total	210	7.5		µg/L	50	7/15/2021 2:36:56 PM	A79841
Surr: Dibromofluoromethane	99.7	70-130		%Rec	50	7/15/2021 2:36:56 PM	A79841
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	50	7/15/2021 2:36:56 PM	A79841
Surr: Toluene-d8	102	70-130		%Rec	50	7/15/2021 2:36:56 PM	A79841
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	50	7/15/2021 2:36:56 PM	A79841

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	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Page 2 of 2



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

Billings, MT 800.735.4489 • Casper, WY 866.233.051
Gillette, WY 866.686.7175 • Helena, MT 877.472.071

ANALYTICAL SUMMARY REPORT

July 21, 2021

Hall Environmental

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

Work Order: G21070258

Project Name: Not Indicated

Energy Laboratories Inc. Gillette WY received the following 1 sample for Hall Environmental on 7/14/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
G21070258-001	2107597-001B; SVE Influent	07/12/21 13:15	07/14/21	Gas	Natural Gas Analysis - BTU Natural Gas Analysis - Compressibility Factor Natural Gas Analysis - GPM Natural Gas Analysis - Molecular Weight Natural Gas Analysis - Routine Natural Gas Analysis - Pressure Base Natural Gas Analysis - Psuedo-Critical Pressure Natural Gas Analysis - Psuedo-Critical Temperature Natural Gas Analysis - Specific Gravity Natural Gas Analysis - Temperature Base

The analyses presented in this report were performed by Energy Laboratories, Inc., 400 W. Boxelder Rd., Gillette, WY 82718, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these tests results, please contact your Project Manager.

Report Approved By:



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 Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 2107597-001B; SVE Influent
Location:
Lab ID: G21070258-001

Report Date: 07/21/21
Collection Date: 07/12/21 13:15
Date Received: 07/14/21
Sampled By: SGL

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
----------	--------	-------	-----------	--------	--------------------

NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT

Oxygen	21.465	Mol %		GPA 2261	07/21/21 08:24 / djb
Nitrogen	77.940	Mol %		GPA 2261	07/21/21 08:24 / djb
Carbon Dioxide	0.491	Mol %		GPA 2261	07/21/21 08:24 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	07/21/21 08:24 / djb
Methane	< 0.001	Mol %		GPA 2261	07/21/21 08:24 / djb
Ethane	0.002	Mol %		GPA 2261	07/21/21 08:24 / djb
Propane	< 0.001	Mol %		GPA 2261	07/21/21 08:24 / djb
Isobutane	0.001	Mol %		GPA 2261	07/21/21 08:24 / djb
n-Butane	0.003	Mol %		GPA 2261	07/21/21 08:24 / djb
Isopentane	0.005	Mol %		GPA 2261	07/21/21 08:24 / djb
n-Pentane	0.004	Mol %		GPA 2261	07/21/21 08:24 / djb
Hexanes plus	0.089	Mol %		GPA 2261	07/21/21 08:24 / djb

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

GPM Ethane	< 0.0003	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM n-Butane	0.0010	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Isopentane	0.0020	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM n-Pentane	0.0010	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Hexanes plus	0.0390	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Pentanes plus	0.0420	gal/MCF		GPA 2261	07/21/21 08:24 / djb
GPM Total	0.0440	gal/MCF		GPA 2261	07/21/21 08:24 / djb

CALCULATED PROPERTIES

Calculation Pressure Base	14.730	psia		GPA 2261	07/21/21 08:24 / djb
Calculation Temperature Base	60	°F		GPA 2261	07/21/21 08:24 / djb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	07/21/21 08:24 / djb
Molecular Weight	29.01	unitless		GPA 2261	07/21/21 08:24 / djb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	07/21/21 08:24 / djb
Pseudo-critical Temperature, deg R	241	deg R		GPA 2261	07/21/21 08:24 / djb
Specific Gravity (air=1.000)	1.005	unitless		GPA 2261	07/21/21 08:24 / djb
Gross BTU per cu ft @ std cond, dry	5.10	BTU/cu ft		GPA 2261	07/21/21 08:24 / djb
Gross BTU per cu ft @ std cond, wet	5.01	BTU/cu ft		GPA 2261	07/21/21 08:24 / djb

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

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



QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental

Work Order: G21070258

Report Date: 07/21/21

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: GPA 2261										Analytical Run: R265715	
Lab ID: ICV-2107210745	12	Initial Calibration Verification Standard							07/21/21 07:46		
Oxygen		0.381	Mol %	0.001	95	75	110				
Nitrogen		5.087	Mol %	0.001	101	90	110				
Carbon Dioxide		4.885	Mol %	0.001	98	90	110				
Hydrogen Sulfide		0.125	Mol %	0.001	126	100	136				
Methane		73.252	Mol %	0.001	100	90	110				
Ethane		5.004	Mol %	0.001	101	90	110				
Propane		5.008	Mol %	0.001	100	90	110				
Isobutane		1.990	Mol %	0.001	99	90	110				
n-Butane		1.972	Mol %	0.001	98	90	110				
Isopentane		0.989	Mol %	0.001	99	90	110				
n-Pentane		1.000	Mol %	0.001	100	90	110				
Hexanes plus		0.307	Mol %	0.001	102	90	110				
Lab ID: CCV-2107210751	12	Continuing Calibration Verification Standard							07/21/21 07:51		
Oxygen		0.604	Mol %	0.001	101	90	110				
Nitrogen		1.292	Mol %	0.001	92	85	110				
Carbon Dioxide		0.942	Mol %	0.001	94	90	110				
Hydrogen Sulfide		0.030	Mol %	0.001	120	70	130				
Methane		93.567	Mol %	0.001	100	90	110				
Ethane		1.013	Mol %	0.001	101	90	110				
Propane		1.008	Mol %	0.001	101	90	110				
Isobutane		0.495	Mol %	0.001	99	90	110				
n-Butane		0.495	Mol %	0.001	99	90	110				
Isopentane		0.200	Mol %	0.001	100	90	110				
n-Pentane		0.200	Mol %	0.001	100	90	110				
Hexanes plus		0.154	Mol %	0.001	103	90	110				
Lab ID: CCV-2107210915	12	Continuing Calibration Verification Standard							07/21/21 09:15		
Oxygen		0.603	Mol %	0.001	101	90	110				
Nitrogen		1.319	Mol %	0.001	94	85	110				
Carbon Dioxide		0.946	Mol %	0.001	95	90	110				
Hydrogen Sulfide		0.030	Mol %	0.001	120	70	130				
Methane		93.543	Mol %	0.001	100	90	110				
Ethane		1.011	Mol %	0.001	101	90	110				
Propane		1.007	Mol %	0.001	101	90	110				
Isobutane		0.494	Mol %	0.001	99	90	110				
n-Butane		0.494	Mol %	0.001	99	90	110				
Isopentane		0.199	Mol %	0.001	99	90	110				
n-Pentane		0.200	Mol %	0.001	100	90	110				
Hexanes plus		0.154	Mol %	0.001	103	90	110				
Method: GPA 2261										Batch: R265715	
Lab ID: G21070258-001ADUP	12	Sample Duplicate			Run: Varian GC_210721A			07/21/21 08:29			
Oxygen		21.468	Mol %	0.001				0.0	10		
Nitrogen		77.938	Mol %	0.001				0.0	10		
Carbon Dioxide		0.491	Mol %	0.001				0.0	10		

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

Billings, MT 800.735.4489 • Casper, WY 800.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental

Work Order: G21070258

Report Date: 07/21/21

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261										
Lab ID: G21070258-001ADUP 12 Sample Duplicate										
Run: Varian GC_210721A										
Batch: R265715										
Hydrogen Sulfide		< 0.001	Mol %	0.001					10	
Methane		< 0.001	Mol %	0.001					10	
Ethane		0.002	Mol %	0.001				0.0	10	
Propane		< 0.001	Mol %	0.001					10	
Isobutane		0.001	Mol %	0.001				0.0	10	
n-Butane		0.003	Mol %	0.001				0.0	10	
Isopentane		0.005	Mol %	0.001				0.0	10	
n-Pentane		0.004	Mol %	0.001				0.0	10	
Hexanes plus		0.088	Mol %	0.001				1.1	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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

Work Order Receipt Checklist

Hall Environmental

G21070258

Login completed by: Chantel S. Johnson

Date Received: 7/14/2021

Reviewed by: Misty Stephens

Received by: csj

Reviewed Date: 7/15/2021

Carrier name: FedEx

- 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: °C
- Water - VOA vials have zero headspace? 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.

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

Contact and Corrective Action Comments:

None



CHAIN OF CUSTODY RECORD 1 1

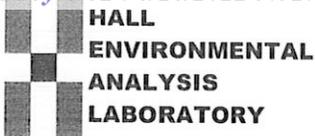
Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

SUB CONTRACTOR: Energy Labs-Gillette		COMPANY: Energy Laboratories		PHONE: (866) 686-7175	FAX:		
ADDRESS: 400 W Boxelder Rd				ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: Gillette, WY 82718							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2107597-001B	SVE Influent	TEDLAR	Air	7/12/2021 1:15:00 PM	1	CO2, O2

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: <i>SG</i>	Date: 7/13/2021	Time: 1:29 PM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples _____ °C Attempt to Cool? _____ Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By: <i>Chow</i>	Date: 7/14/2021	Time: 10:37 AM	
TAT:	Standard <input checked="" type="checkbox"/>	RUSH	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>	
Fed ex						



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: 2107597 RcptNo: 1

Received By: Juan Rojas 7/13/2021 1:18:00 PM
Completed By: Sean Livingston 7/13/2021 1:19:50 PM
Reviewed By: JR 7/13/21

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Client

Log In

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

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: MPG 7/13/21

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, NA, Good, [], [], [], []

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 43104

CONDITIONS

Operator: Harvest Four Corners, LLC 1111 Travis Street Houston, TX 77002	OGRID: 373888
	Action Number: 43104
	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