

July 31, 2020

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

**RE: Quarterly Solar SVE System Update  
Trunk L Tank Battery  
Harvest Four Corners, LLC  
Incident Number NVF1900731813  
Remediation Permit Number 3RP-13665  
Rio Arriba County, New Mexico**

Dear Mr. Smith:

LT Environmental, Inc. (LTE), a member of WSP, on behalf of Harvest Four Corners, LLC (Harvest), presents the following quarterly report summarizing the solar soil vapor extraction (SVE) system performance at the Trunk L Tank Battery (Site), located in Unit A of Section 28, Township 28 North, Range 05 West, in Rio Arriba County, New Mexico (Figure 1).

## **BACKGROUND**

The solar SVE system was installed on September 18, 2019, to remediate subsurface soil impacts following a release on December 14, 2018. Excessive liquids were received by the Site during a pigging event. Additionally, the volume of fluid in the slug catcher was elevated due to a stuck float valve, causing a release of approximately 22 barrels (bbls) into the lined secondary containment. Harvest reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on December 28, 2018, and the event was assigned Incident Number NVF1900731813. Previous SVE installation, soil sampling, and delineation activities are summarized in earlier reports submitted to the NMOCD dated April 12, 2019, January 24, 2020, and April 30, 2020.

## **SOLAR SVE SYSTEM OPERATION AND MONITORING**

The solar SVE system consists of a 2.75 horsepower, three-phase blower capable of producing 105 cubic feet per minute (cfm) at 50 inches of water column (IWC) vacuum, with a maximum vacuum capability of 84 IWC. Each SVE well was installed with its own adjustable valve and vacuum gauge on a manifold to control flow and vacuum. LTE utilized a solar powered SVE system due to the remote location and the lack of electrical grid power at the Site. The blower is powered by 10 solar panels with a nominal maximum power output of 3,050 watts. The blower is connected to the solar panels via a motor controller that automatically starts the system as soon as sunlight is available and throttles the blower up as sun power increases throughout the day to

maximize efficiency. Seasonally, there is approximately 10 hours in the winter and 12 hours in the summer of available solar power in Farmington, New Mexico. The complete solar SVE system is constructed as one unit designed for utilization at off-grid locations and operates autonomously. The layout of the solar SVE system is depicted on Figure 2.

Between startup of the SVE system on September 18, 2019, and the last site visit on June 10, 2020, there have been 278 days of operation, with an estimated 2,997 total hours of nominal daylight available for solar SVE system operation. Since installation, the system had an actual runtime of 3,115 hours, for an overall runtime efficiency of 103.9 percent (%). Below is a table showing SVE system runtime in comparison with nominal available daylight hours per month, according to the National Oceanic and Atmospheric Administration's National Weather Service.

Time Period	Start up on 9/18/19 to 9/30/19	4th Quarter 2019	1st Quarter 2020	April 2020	May 2020	6/1/2020 to 6/10/2020
Days	12	92	103	30	31	10
Avg. Nominal Daylight Hours	12	10	10	12	13	14
Available Runtime Hours	144	920	1030	360	403	140
<b>Total Available Daylight Runtime Hours</b>						<b>2,997</b>
<b>Actual Runtime Hours</b>						<b>3,115</b>
<b>Cumulative % Runtime</b>						<b>103.9%</b>
<b>Quarterly Available Daylight Runtime Hours</b>						<b>903</b>
<b>Quarterly Runtime Hours</b>						<b>958</b>
<b>Quarterly % Runtime</b>						<b>106.1%</b>

An initial air sample was collected on September 18, 2019, from the influent side of the blower on the solar SVE system. Subsequent air samples were collected with the last sample collected June 10, 2020 (Table 1). Samples were collected in Tedlar® bags and submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analyses of benzene, toluene, ethylbenzene, and total xylenes (BTEX) using United States Environmental Protection Agency (EPA) Method 8021 and total volatile petroleum hydrocarbons (TVPH) using EPA Method 8015.

Estimated air emissions were calculated using air sample data collected to date (Table 2). The impacted mass source removal via the solar SVE system to date is an estimated 6,526 pounds (lbs) of TVPH. An estimated 1,052 gallons of air equivalent condensate has been recovered to date. An increase in TVPH analytical results was observed due to system optimization, through focusing system operation on the four SVE wells with the highest photoionization detector measurements.

### PLAN FOR NEXT QUARTER OF OPERATION

During the upcoming 3<sup>rd</sup> quarter 2020 operations, visits to the Site will continue on a monthly basis by LTE personnel to ensure 90% runtime efficiency continues and that any maintenance issues are addressed. An air sample will be collected in the 3<sup>rd</sup> quarter and analyzed for BTEX by EPA Method 8021 and TVPH by EPA Method 8015. An updated quarterly report with sample results, runtime, and mass source removal will be submitted under separate cover.

Quarterly air sampling and reporting will continue until a decline in volatile organic compounds (VOCs) is observed and indicates that hydrocarbon impacts have been reduced. At that time, LTE will conduct additional soil sampling to investigate potential residual impacts and request closure if concentrations of BTEX and TPH are below the applicable standards as detailed in the approved Remediation Work Plan dated May 28, 2019.

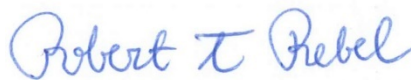
If the final delineation samples indicate hydrocarbon impact has been reduced to below Table 1 Closure Criteria, LTE will present the confirmation laboratory analysis data in a report and request closure of the release. Should the results indicate that analytes in the soil exceed Table 1 Closure Criteria, LTE will continue to operate the system and potentially make adjustments based on results of the investigation.

Sincerely,

LT ENVIRONMENTAL, INC.



Eric Carroll  
Staff Geologist



Robert Rebel, P.E.  
Senior Engineer

cc: Kijun Hong, Harvest Four Corners

### ATTACHMENTS

- Figure 1: Site Location Map
- Figure 2: SVE System Layout
- Table 1: Air Sample Analytical Results
- Table 2: Soil Vapor Extraction System Recovery & Emissions Summary
- Attachment 1: Laboratory Analytical Report





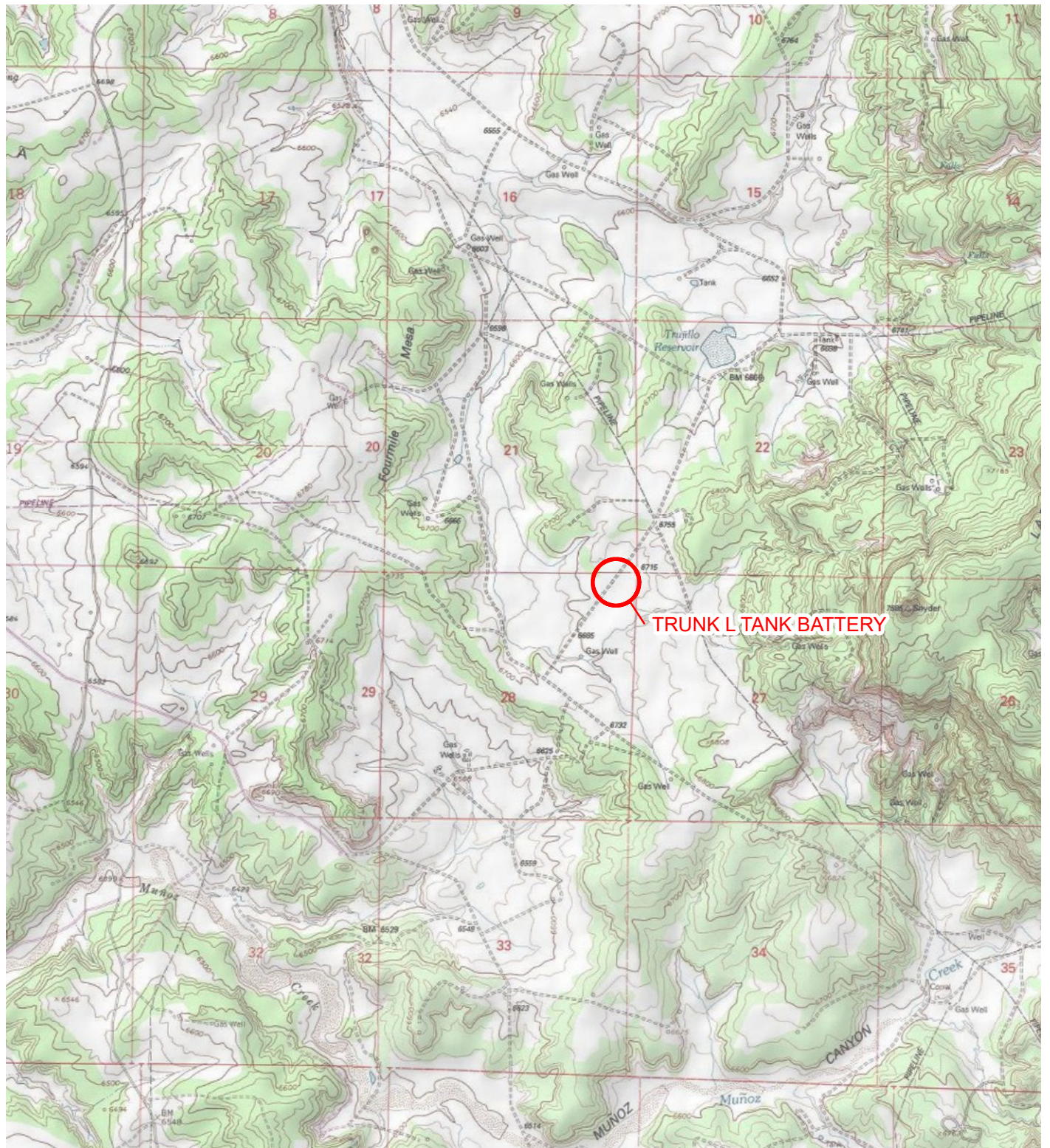
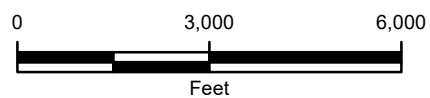


IMAGE COURTESY OF ESRI/USGS

## LEGEND

 SITE LOCATION



NEW MEXICO

**FIGURE 1**  
**SITE LOCATION MAP**  
**TRUNK L TANK BATTERY**  
**NENE SEC 28 T28N R5W**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**



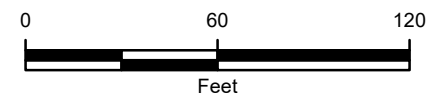




IMAGE COURTESY OF GOOGLE EARTH 2016

# LEGEND

- SHALLOW SVE WELL
- DEEP SVE WELL
- ABOVEGROUND REMEDIATION SYSTEM LINE
- ☐ SOLAR SVE SKID
- ☐ 27.5 FOOT SHALLOW SVE RADIUS OF INFLUENCE
- ☐ 27.5 FOOT DEEP SVE RADIUS OF INFLUENCE



**FIGURE 2**  
**SVE SYSTEM LAYOUT**  
**TRUNK L TANK BATTERY**  
**NENE SEC 28 T28N R5W**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**





**TABLE 1**  
**AIR SAMPLE ANALYTICAL RESULTS**

**TRUNK L TANK BATTERY**  
**HARVEST FOUR CORNERS, LLC**  
**RIO ARriba COUNTY, NEW MEXICO**

Sample ID	Sample Date	Vapor PID (ppm)	Benzene (µg/L)	Toluene (µ/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
Influent 9/18	9/18/2019	946	1,000	1,500	50	550	NA
Influent 10/18	10/18/2019	931	250	410	6.5	74	NA
Influent 11/14	11/14/2019	578	1.8	4.3	0.19	1.7	250
Influent 3/3/20	3/3/2020	868	3.9	22	1.3	13	760
Influent 5/1/20	5/1/2020	913	610	1,500	58	570	95,000
Influent 6/10/20	6/10/2020	1,527	640	1,600	56	530	95,000

**NOTES:**

µg/L - micrograms per liter

NA - not analyzed

pid - photoionization detector

PPM - parts per million

TVPH- total volume petroleum hydrocarbons





**TABLE 2**  
**SOIL VAPOR EXTRACTION SYSTEM RECOVERY & EMISSIONS SUMMARY**

**TRUNK L TANK BATTERY**  
**HARVEST FOUR CORNERS, LLC**  
**RIO ARriba COUNTY, NEW MEXICO**

**Sample Information and Lab Analysis**

Date	Total Flow (cf)	Delta Flow (cf)	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
9/18/2019*	3,033	3,033	1,435	1,000	1,500	50	550	3,013
10/18/2019*	723,668	720,635	931	250	410	6.5	74	744
11/14/2019	1,339,500	1,336,467	578	1.8	4.3	0.19	1.7	250
3/3/2020	1,339,500	1,336,467	868	3.9	22	1.3	13	760
4/1/2020**	3,210,685	2,487,018	838	3.7	21	1.2	12	733
5/1/2020	6,007,008	4,667,508	913	610	1,500	58	570	95,000
6/10/2020	5,481,777	4,142,277	1,527	640	1,600	56	530	95,000
Average			1,013	358	722	25	250	27,929

**Vapor Extraction Calculations**

Date	Flow Rate (cfm)	Benzene (lb/hr)	Toluene (lb/hr)	Ethyl- benzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
9/18/2019	33.70	0.1262	0.1892	0.0063	0.0694	0.3801
10/18/2019	37.75	0.0353	0.0579	0.0009	0.0105	0.1051
11/14/2019	38.00	0.0003	0.0006	0.0000	0.0002	0.0356
3/3/2020	21.26	0.0003	0.0018	0.0001	0.0010	0.0605
4/1/2020	21.26	0.0003	0.0017	0.0001	0.0010	0.0583
5/1/2020	39.20	0.0895	0.2201	0.0085	0.0836	13.9404
6/10/2020	29.33	0.0703	0.1757	0.0061	0.0582	10.4304
Average	31.50	0.05	0.09	0.00	0.03	3.57

**Pounds Extracted Over Total Operating Time**

Date	Total Operational Hours	Delta Hours	Benzene (lbs)	Toluene (lbs)	Ethyl-benzene (lbs)	Total Xylenes (lbs)	Total BTEX (lbs)	TVPH (lbs)
9/18/2019	1.5	1.5	0.2	0.3	0.0	0.1	0.6	0.6
10/18/2019	319.5	318.0	11.2	18.4	0.3	3.3	33.3	33.4
11/14/2019	587.5	268.0	0.1	0.2	0.0	0.1	0.3	9.5
3/3/2020	1,814	1,226.5	0.4	2.1	0.1	1.3	3.9	74.2
4/1/2020	2,517	703.0	0.2	1.2	0.1	0.7	2.1	41.0
5/1/2020	2,554	37.0	3.3	8.1	0.3	3.1	14.9	515.8
6/10/2020	3,115	561.0	39.4	98.6	3.4	32.6	174.1	5851
Total Extracted to Date			54.8	128.9	4.3	41.2	229.1	6,526

**NOTES**

\* - TVPH data extrapolated from PID values

\*\* - Analytical data extrapolated from PID values

BTEX - benzene, toluene, ethylbenzene, total xylenes

cf - cubic feet

cfm - cubic feet per minute

lbs - pounds

lb/hr - pounds per hour

µg/L - microgram per liter

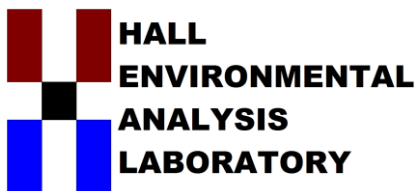
PID - photoionization detector

ppm - parts per million

TVPH - total volatile petroleum hydrocarbons







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

May 06, 2020

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Trunk L Tank Battery

OrderNo.: 2005060

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/2/2020 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **2005060**

Date Reported: **5/6/2020**

**CLIENT:** Harvest

**Client Sample ID:** Influent 5-1-20

**Project:** Trunk L Tank Battery

**Collection Date:** 5/1/2020 3:10:00 PM

**Lab ID:** 2005060-001

**Matrix:** AIR

**Received Date:** 5/2/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	95000	500	E	µg/L	100	5/4/2020 11:19:13 AM	G68625
Surr: BFB	176	53-256		%Rec	100	5/4/2020 11:19:13 AM	G68625
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	610	10		µg/L	100	5/4/2020 11:19:13 AM	B68625
Toluene	1500	10	E	µg/L	100	5/4/2020 11:19:13 AM	B68625
Ethylbenzene	58	10		µg/L	100	5/4/2020 11:19:13 AM	B68625
Xylenes, Total	570	20		µg/L	100	5/4/2020 11:19:13 AM	B68625
Surr: 4-Bromofluorobenzene	99.2	81.6-133		%Rec	100	5/4/2020 11:19:13 AM	B68625

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.	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		



## Sample Log-In Check List

Client Name: **Harvest**

Work Order Number: **2005060**

RcptNo: 1

Received By: **Juan Rojas**

5/2/2020 8:25:00 AM

*Juan Rojas*

Completed By: **Leah Baca**

5/2/2020 9:36:12 AM

*Leah Baca*

Reviewed By:

*SR 5/2/20*

### Chain of Custody

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

### Log In

3. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: *LB 5/2/20*

### 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:

### Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

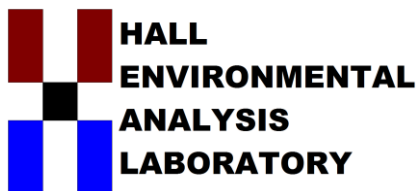
Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

BTEX / MTBE / TMB's (8021)
TPH:8015D(GRO / DRO / MRO)
8081 Pesticides/8082 PCB's
EDB (Method 504.1)
PAHs by 8310 or 8270SIMS
RCRA 8 Metals
Cl <sub>2</sub> , F <sub>2</sub> , Br <sub>2</sub> , 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)
X BT EX X TVPH

Chain-of-Custody Record									
Client: Harvest Midstream		Turn-Around Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush		Project Name: Trunk L Tank Battery					
Mailing Address: 1785 Arroyo Dr., Bloomfield NM		Project #: 505-632-4475		Project Manager: Kiyun Hong LIE-Danny Burns					
Phone #: 505-632-4475		email or Fax#: Khong@harvestmidstream.com		Sampler: Danny Burns		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		# of Coolers: 1	
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other		Cooler Temp (including CF): 29 to 30		Container Type and #		Preservative Type	
Date: 5-1-20		Time: 15:10		Matrix: Air		Sample Name: Influent S-1-20		HEAL No. 2005060	
Date: 5-1-20		Time: 16:30		Matrix:		Sample Name:		HEAL No. -001	
Date: 5-1-20		Time: 17:53		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 18:25		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 18:50		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 19:15		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 19:40		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 20:05		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 20:30		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 20:55		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 21:20		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 21:45		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 22:10		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 22:35		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 23:00		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 23:25		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 23:50		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 00:15		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 00:40		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 01:05		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 01:30		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 01:55		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 02:20		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 02:45		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 03:10		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 03:35		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 04:00		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 04:25		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 04:50		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 05:15		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 05:40		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 06:05		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 06:30		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 06:55		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 07:20		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 07:45		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 08:10		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 08:35		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 09:00		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 09:25		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 09:50		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 10:15		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 10:40		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 11:05		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 11:30		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 11:55		Matrix:		Sample Name:		HEAL No.	
Date: 5-1-20		Time: 12:20		Matrix:		Sample Name:		HEAL	

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



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

June 17, 2020

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Trunk L

OrderNo.: 2006687

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/12/2020 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **2006687**

Date Reported: **6/17/2020**

**CLIENT:** Harvest

**Client Sample ID:** Influent 6-10-20

**Project:** Trunk L

**Collection Date:** 6/10/2020 11:10:00 AM

**Lab ID:** 2006687-001

**Matrix:** AIR

**Received Date:** 6/12/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	95000	500	E	µg/L	100	6/15/2020 9:29:32 AM	G69658
Surr: BFB	166	53-256		%Rec	100	6/15/2020 9:29:32 AM	G69658
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	640	10		µg/L	100	6/15/2020 9:29:32 AM	B69658
Toluene	1600	10	E	µg/L	100	6/15/2020 9:29:32 AM	B69658
Ethylbenzene	56	10		µg/L	100	6/15/2020 9:29:32 AM	B69658
Xylenes, Total	530	20		µg/L	100	6/15/2020 9:29:32 AM	B69658
Surr: 4-Bromofluorobenzene	105	79.9-124		%Rec	100	6/15/2020 9:29:32 AM	B69658

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.	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		



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2006687

17-Jun-20

Client: Harvest

Project: Trunk L

Sample ID: 2006687-001adup		SampType: DUP		TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	Influent 6-10-20	Batch ID: G69658		RunNo: 69658						
Prep Date:		Analysis Date: 6/15/2020		SeqNo: 2417954		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	110000	500						12.9	20	E
Surr: BFB	360000		200000		181	53	256	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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2006687

17-Jun-20

Client: Harvest

Project: Trunk L

Sample ID: 2006687-001adup		SampType: DUP		TestCode: EPA Method 8021B: Volatiles						
Client ID: Influent 6-10-20		Batch ID: B69658		RunNo: 69658						
Prep Date:		Analysis Date: 6/15/2020		SeqNo: 2417987		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	730	10						12.8	20	
Toluene	1900	10						15.1	20	E
Ethylbenzene	67	10						18.5	20	
Xylenes, Total	670	20						22.2	20	R
Surr: 4-Bromofluorobenzene	200		200.0		102	79.9	124	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



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

## Sample Log-In Check List

Client Name: Harvest

Work Order Number: 2006687

RcptNo: 1

Received By: Emily Mocho 6/12/2020 8:20:00 AM

Completed By: Juan Rojas 6/12/2020 9:16:55 AM

Reviewed By: EM 6/12/20

### Chain of Custody

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

### Log In

3. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒  
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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  $\geq 12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

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

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good				

