District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | NVF1900731813 |
| District RP | 13665 |
| Facility ID | |
| Application ID | |

# Release Notification

pLS 1917529119

## Responsible Party

| | | | |
|---|---|---|---|
| Responsible Party | **Harvest Four Corners, LLC** | OGRID | **37388** |
| Contact Name | **Kijun Hong** | Contact Telephone | **(505) 632-4475** |
| Contact email | **khong@harvestmidstream.com** | Incident # *(assigned by OCD)* | NVF1900731813 |
| Contact mailing address | **1755 Arroyo Dr., Farmington, NM 87413** | | |

## Location of Release Source

Latitude **36.643012** Longitude **-107.354571**
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name **Trunk L** | Site Type **Compressor Station** |
| Date Release Discovered **12/14/2018** | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| **P** | **28** | **28N** | **5W** | **Rio Arriba** |

NMOCD
MAY 30 2019
DISTRICT III

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* )

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☒ No |
| ☒ Condensate | Volume Released (bbls) **22 BBLs into lined secondary containment.** | Volume Recovered (bbls) **22** |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

**Excessive liquids receive by station during a pig run. Also, higher initial level in slug catcher due to stuck float valve.**

**All free liquids have been recovered by vac truck from the lined secondary containment.**

81

## Smith, Cory, EMNRD

**From:** Smith, Cory, EMNRD
**Sent:** Friday, June 21, 2019 10:54 AM
**To:** 'Kijun Hong'
**Subject:** RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Kijun,

OCD has reviewed the remediation plan for the Trunk L received on May 31, 2019 and have approved the plan with the following conditions of approval:

- Harvest will achieve a run time of 90% or better of the proposed 10 hours in winter and 12 hours in summer per quarter.
- Harvest will collect the proposed air samples prior to the inlet of the vacuum pump but, after the convergence of all SVE wells or alternativity an air sample from each SVE well is acceptable.
    - The gas sample will be analyzed for EPA Method 8260 Full List and include Carbon Dioxide and Oxygen.
- Harvest will collect an initial gas sample for laboratory analysis shortly after startup of SVE operations after the initial gas sample an annual sample as described in the remediation plan is acceptable.
- Harvest quarterly report will include at a minimum
    - Summary of remediation activity for the quarter
    - SVE Run time
    - SVE mass removal
    - Field notes (VOC readings, water/product recovery, inspection dates etc)
    - Amount of liquids/product recovered if any (This will be recorded from the knock out drum since ground water in not expected to be encountered)

OCD recommends the installation of an additional "Vent" well with fans or even active air sparging well to increase oxygen levels which would promote biodegradation and assist in air movement for sve remediation.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

---

**From:** Smith, Cory, EMNRD
**Sent:** Monday, May 6, 2019 10:15 AM
**To:** 'Kijun Hong' <khong@harvestmidstream.com>
**Subject:** RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Kijun,

Yes an SVE system is an OCD acceptable insitu remediation technique.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

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**From:** Kijun Hong <khong@harvestmidstream.com>
**Sent:** Monday, May 6, 2019 10:04 AM
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Subject:** [EXT] RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Hey Cory,
Would you be open to installing an SVE system to remediate?

This would allow us to keep tanks in service.

---

**From:** Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
**Sent:** Thursday, May 02, 2019 2:09 PM
**To:** Kijun Hong <khong@harvestmidstream.com>
**Cc:** bherb@ltenv.com; Joseph Pruitt <jpruitt@harvestmidstream.com>; Lloyd Bell <lbell@harvestmidstream.com>; tjones@harvestmidstream.com; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
**Subject:** RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Kijun,

The reasons for the denied deferral request is as follows.

- With ground water possible at 78' and depth of contamination between Surface and ~39' the possible distance to interfacing with ground water is only 40' which could cause a risk to ground water.
- OCD determination of causing a major facility deconstruction is for sites typically that have permanent foundations/features. Examples of this would be Tank battery's located in concrete containment barriers, Pipeline/electrical lines located in facilities that have concrete/I-beam supports, buildings with permanent foundations etc. Facility/System shutdowns are not considered major facility deconstruction.
- Natural degradation is not an approved OCD remediation method.

As mentioned on the phone with Mr. Jones if Harvest disagrees with the Divisions determination of the remediation plan Harvest may request a hearing per 19.15.29.12 C(5) NMAC

If you have any additional questions I can be contacted and the number below.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115

cory.smith@state.nm.us

**From:** Kijun Hong <khong@harvestmidstream.com>
**Sent:** Thursday, May 2, 2019 10:52 AM
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
**Cc:** bherb@ltenv.com; Joseph Pruitt <jpruitt@harvestmidstream.com>; Lloyd Bell <lbell@harvestmidstream.com>
**Subject:** [EXT] RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Cory,
Could you please provide more explanation on the reasoning for denial?

We are planning on repairing the liner next week. Also, given the new depth to ground water data, we are still fully delineated and there is no change in the closure criteria for GRO+DRO. The only closure standards we exceed are for GRO+DRO directly under the tank (BH1 and BH7). These samples came in at 1,230 mg/kg and 1,310 mg/kg respectively against the closure standard of 1,000mg/kg.

Breaking down NMOCD's regulations, Harvest has met all conditions for deferral:

- "If contamination is located in areas immediately under or around production equipment such as production tanks"
- "where remediation could cause a major facility deconstruction"
- "so long as the contamination is fully delineated"
- "and does not cause an imminent risk to human health, the environment, or ground water."

Respectfully,
Kijun

**From:** Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
**Sent:** Thursday, May 02, 2019 9:53 AM
**To:** Kijun Hong <khong@harvestmidstream.com>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
**Cc:** bherb@ltenv.com; Joseph Pruitt <jpruitt@harvestmidstream.com>; Lloyd Bell <lbell@harvestmidstream.com>
**Subject:** RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Kijun,

The current liner integrity has already been compromised. Ground water is estimated to be at 78' based on a cathodic well report located on the HEC San Juan 28-5 #48 (30-039-07361).

The OCD has denied the deferral request and additional remediation will be required.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

**From:** Kijun Hong <khong@harvestmidstream.com>
**Sent:** Wednesday, May 1, 2019 11:27 AM
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
**Cc:** bherb@ltenv.com; Joseph Pruitt <jpruitt@harvestmidstream.com>; Lloyd Bell <lbell@harvestmidstream.com>
**Subject:** [EXT] RE: [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Cory,
Harvest is proposing to leave the impacted soil in place for several reasons:

1. There are currently 4 aboveground storage tanks and one below grade storage tank that would have to be removed from service in order to dig out impacted soil or install a remediation system. These tanks are associated with the Trunk L facility and their removal would cause major facility deconstruction.
2. The containment is lined and in situ remediation would affect the existing liner.
3. Deferring remediation does not cause an imminent risk to human health, the environment, or groundwater.
    a. Groundwater is estimated to be deep and unlikely to be affected by the impacted soil.
    b. Concentrations of DRO/GRO only exceed the NMOCD closure criteria by 310 mg/kg in one sample and are fully delineated laterally and vertically.
    c. No impacts were observed outside the extent of the containment. A new liner will act as a cap over the impacted soil which will cover surface impact and the possibility of impact to surface water.
    d. The liner will help prevent migration of the impacts vertically within the subsurface.

In response to your questions, the insitu remediation proposed is natural degradation with a low potential for migration based on the above assessment.

Harvest estimates that these tanks will be in place for approximately 30 years.

---

**From:** Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
**Sent:** Friday, April 26, 2019 1:06 PM
**To:** Kijun Hong <khong@harvestmidstream.com>
**Cc:** bherb@ltenv.com; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
**Subject:** [EXTERNAL] RE: Harvest Midstream - Trunk L - Update

Kijun,

Looking at the deferral request, How come Harvest did not investigate any insitu remediation options? I did not see a provided reason why the equipment can be moved and or temporary tanks cant be set?

What is the time line for the station to be abandoned if the deferral is granted? ?

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

---

**From:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
**Sent:** Tuesday, March 12, 2019 2:49 PM
**To:** Kijun Hong <khong@harvestmidstream.com>

**Cc:** bherb@ltenv.com; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
**Subject:** RE: Harvest Midstream - Trunk L - Update

Good afternoon Kijun,

The OCD grants Harvest an 30 day extension to remediate the referenced release. The final C-141 shall be submitted to the OCD by the close of business on April 12, 2019.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

---

**From:** Kijun Hong <khong@harvestmidstream.com>
**Sent:** Tuesday, March 12, 2019 1:30 PM
**To:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
**Cc:** bherb@ltenv.com
**Subject:** [EXT] Harvest Midstream - Trunk L - Update

Vanessa,
On December 14, 2018, approximately 22 barrels (bbl) of condensate overflowed from an aboveground tank in a tank battery associated with, and just south of the Trunk L facility. The release was contained within the lined secondary containment and 22 bbl of condensate were removed via vacuum truck upon discovery of the release. An initial C-141 was submitted on December 28, 2018, and NMOCD assigned the release incident number nVF1900731813.

Due to snow and ice accumulation, a preliminary liner inspection was delayed until 2/5/2019. During the liner inspection, small holes were observed in the liner. The liner was pulled back and stained soil was observed to at least 1 foot below ground surface. Ten soil samples were collected from beneath the liner for field screening using a photoionization detector (PID). The PID measurements ranged from 187 parts per million (ppm) to 6,519 ppm. Further investigation and delineation of the release has been delayed due to poor weather, road conditions, and continued pooling snow and water within the containment.

Harvest has decided to retain a consultant to conduct a more detailed investigation. As a result of the liquids accumulation, Harvest is requesting an extension to the 90-day requirement for site characterization or closure reporting required in 19.15.29.11.A NMAC. The 90-day deadline is March 14, 2019. Harvest requests an extension until March 31, 2019. Harvest intends to have a vacuum truck onsite Wednesday March 13, 2019 to remove any standing precipitation in the containment area. LT Environmental will be onsite immediately afterward on Wednesday March 13, 2019, to delineate vertical and horizontal impacts to soil via hand auger. Soil samples will be submitted to Hall Analytical Laboratories for analysis of TPH, BTEX, and chloride. Based on results of analytical analysis, Harvest will submit a comprehensive remediation plan by the extension deadline. If LT Environmental encounters refusal or is unable to obtain vertical extent via hand auger, a follow up email will be submitted to the NMOCD detailing the attempt and the next course of action.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NVF1900731813. |
| District RP | |
| Facility ID | |
| Application ID | |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? | |

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kijun Hong Title: Environmental Specialist

Signature: Date: 12/28/2018

email: khong@harvestmidstream.com Telephone: 505-436-8457

**OCD Only**

Received by: Date:

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NVF1900731813. |
| District RP | |
| Facility ID | |
| Application ID | |

# Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

| | |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release? | _____ |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☐ Yes ☒ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☐ Yes ☒ No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist**: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NVF1900731813. |
| District RP | |
| Facility ID | |
| Application ID | |

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kijun Hong

Title: Environmental Specialist

Signature: _____ _____

Date: 5/31/2019

email: khong@harvestmidstream.com

Telephone: 505-632-4475

**OCD Only**

Received by: _____

Date: _____

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NVF1900731813. |
| District RP | |
| Facility ID | |
| Application ID | |

# Remediation Plan

**Remediation Plan Checklist:** ***Each of the following items must be included in the plan.***

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kijun Hong — Title: Environmental Specialist

Signature: _____ — Date: 5/31/2019

email: khong@harvestmidstream.com — Telephone: (505) 632-4475

**OCD Only**

Received by: _____ — Date: 5/31/19

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ — Date: 6/21/19

COA: Sent via email & Attached.

LT Environmental, Inc.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096

May 31, 2019

Mr. Cory Smith
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos
Aztec, New Mexico

**RE: Remediation Work Plan**
**Trunk L Tank Battery**
**Harvest Four Corners, LLC**
**Incident Number NVF1900731813**
**Rio Arriba, New Mexico**

Dear Mr. Smith:

LT Environmental, Inc. (LTE), on behalf of Harvest Four Corners, LLC (Harvest), presents the following remediation work plan associated with subsurface petroleum hydrocarbon impacts encountered at the Trunk L tank battery (Site). The Site is located in Unit A, Section 28, Township 28 North, Range 5 West, in Rio Arriba County, New Mexico (Figure 1).

This remediation work plan is being submitted in response to a rejection on May 2, 2019, by the New Mexico Oil Conservation Division (NMOCD) of a deferral request submitted on April 12, 2019. The site history, and previous delineation of petroleum hydrocarbon impacts to soil were described in the previously submitted report. This remediation work plan was prepared to address the concerns characterized by the NMOCD, as elevated levels of combined total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO) remaining in the subsurface within the secondary containment. There is also possible groundwater at 78 feet below ground surface (bgs) based on a deep-ground bed cathodic well protection well located at Hilcorp Energy Corporation gas well San Juan 28-5 Unit No. 048.

## BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release,* of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC), as described in the *Closure Request* submitted April 12, 2019. The following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg TPH; 1,000 mg/kg combined GRO and DRO; and 10,000 mg/kg chloride.

Soil samples collected during delineation activities were primarily composed of clayey sand to sandy lithologies. Field-identified soil impacts consisting of petroleum hydrocarbon odors and

elevated field screening results were observed in soil sample locations BH01 and BH-7. Laboratory analytical results confirmed field observations and indicated that two soil samples exceeded the NMOCD Table 1 closure criteria of 1,000 mg/kg combined GRO and DRO:

- BH01 at 20 feet bgs; and
- BH-7 at 8 feet to 10 feet bgs.

Soil sample locations and laboratory analytical results are illustrated on Figure 2.

**PROPOSED REMEDIATION PLAN**

Soil vapor extraction (SVE) is being proposed to remediate the petroleum hydrocarbon impacts to soil. SVE technology remediates petroleum hydrocarbon impacts *in situ* by applying a vacuum to wells drilled into the impacted area. The applied vacuum initiates air flow from the subsurface and into the SVE wells. The subsurface air flow enhances petroleum hydrocarbon volatilization, and the vapors are pulled out by a blower/vacuum pump at the surface. The removed petroleum hydrocarbons are typically emitted directly into the atmosphere unless air permitting thresholds or sensitive receptors require air treatment for petroleum hydrocarbon removal.

To remediate the petroleum hydrocarbon impacts to soil, LTE initially proposes installing six SVE wells with screened intervals ranging from 5 feet to 40 feet bgs. The SVE wells will be nested, with three separate boreholes containing two SVE wells each. Based on the observed lithology at the Site, a conservative radius of influence of approximately 27.5 feet was used for each remediation well in the SVE design. The remediation system layout is depicted on Figure 3, and the screened intervals for each remediation well is detailed in the following table:

| Well ID | Screened Interval (feet bgs) |
|---|---|
| SVE01 | 5 to 15 |
| SVE02 | 25 to 35 |
| SVE03 | 10 to 20 |
| SVE04 | 30 to 40 |
| SVE05 | 5 to 15 |
| SVE06 | 25 to 35 |

LTE proposes using solar power for the SVE system due to the remoteness and the lack of sufficient electrical supply at the Site. The SVE wells will be connected via aboveground piping to a 2.75 horsepower blower capable of producing 105 cubic feet per minute (cfm) at 50 inches of water column vacuum, with a maximum vacuum capability of 84 inches of water column.

Each SVE well will have its own adjustable valve and vacuum gauge on a manifold to control flows.

The blower will be powered by ten 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 there is sunlight available and throttles the blower up as sun power increases throughout the day to maximize efficiency. Seasonally, there is approximately ten hours in the winter and 12 hours in the summer of solar power available in Farmington, New Mexico. The complete solar SVE system is constructed as one unit designed for potential remediation use at other off-grid locations and can operate completely autonomous.

**TIMELINE**

The following timeline is proposed with day zero being the day this workplan receives approval.

- Installing six SVE wells - 30 days; and
- Installing and starting the solar SVE system - 90 days.

Quarterly reporting will be conducted after installing the SVE system to inform NMOCD on major site advancements and solar SVE system operations. Quarterly reports will document petroleum hydrocarbon mass recovery, system runtime, and gas sample analysis. An annual gas sample will be collected from the SVE system stack and submitted for analysis of full volatile organic compounds (VOCs) by United States Environmental Protection Agency Method 8260. Additional quarterly gas samples will be collected and analyzed for BTEX and TPH. Air samples will be field screened with a photo-ionization detector for VOCs.

LTE recommends observing VOCs and/or air samples from each SVE well periodically to assess system performance and effectiveness. Initially, biweekly visits to check system operations and conduct any necessary maintenance will be conducted. After 2 months, visits will be reduced to a monthly frequency.

Once a decline in VOCs is observed and indicates that petroleum hydrocarbon impacts have been reduced, Harvest will conduct additional soil sampling to investigate potential residual subsurface impacts and request closure or additional system operations based on the results. LTE anticipates one year of operation to obtain site closure. LTE will use a hollow-stem auger soil boring and sampling program using a CME 55 drill rig to advance two boreholes to approximately 40 feet bgs. Boreholes will be in locations approximately equidistant between SVE borehole locations to confirm successful remediation and will be used as confirmation closure samples. Discrete soil samples will be collected every five feet from immediately beneath the ground surface to total depth and field screened for VOCs. Soil samples with the

highest observed field screening and the terminus of the boring will be collected and submitted for laboratory analysis of BTEX, TPH, and chloride.

Should the final confirmation soil samples be compliant with the NMOCD Table 1 closure criteria, LTE will summarize the laboratory analysis and sampling activities in a subsequent report requesting closure of the release event. Should the results indicate soil impacts exceed NMOCD Table 1 closure criteria, LTE will continue to operate the system and potentially make adjustments base on the results of the investigation.

We look forward to your review of this report and subsequent approval of the remediation approach. If you have any questions or comments, please do not hesitate to contact Mr. Danny Burns at (970) 385-1096 or dburns@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Danny Burns
Project Geologist

Ashley Ager, P.G.
Senior Geologist

Attachments:

Figure 1 – Site Location Map
Figure 2 – Soil Analytical Results
Figure 3 – SVE System Layout
Table 1 – Soil Analytical Results
Attachment 1 – Laboratory Analytical Reports

# FIGURES

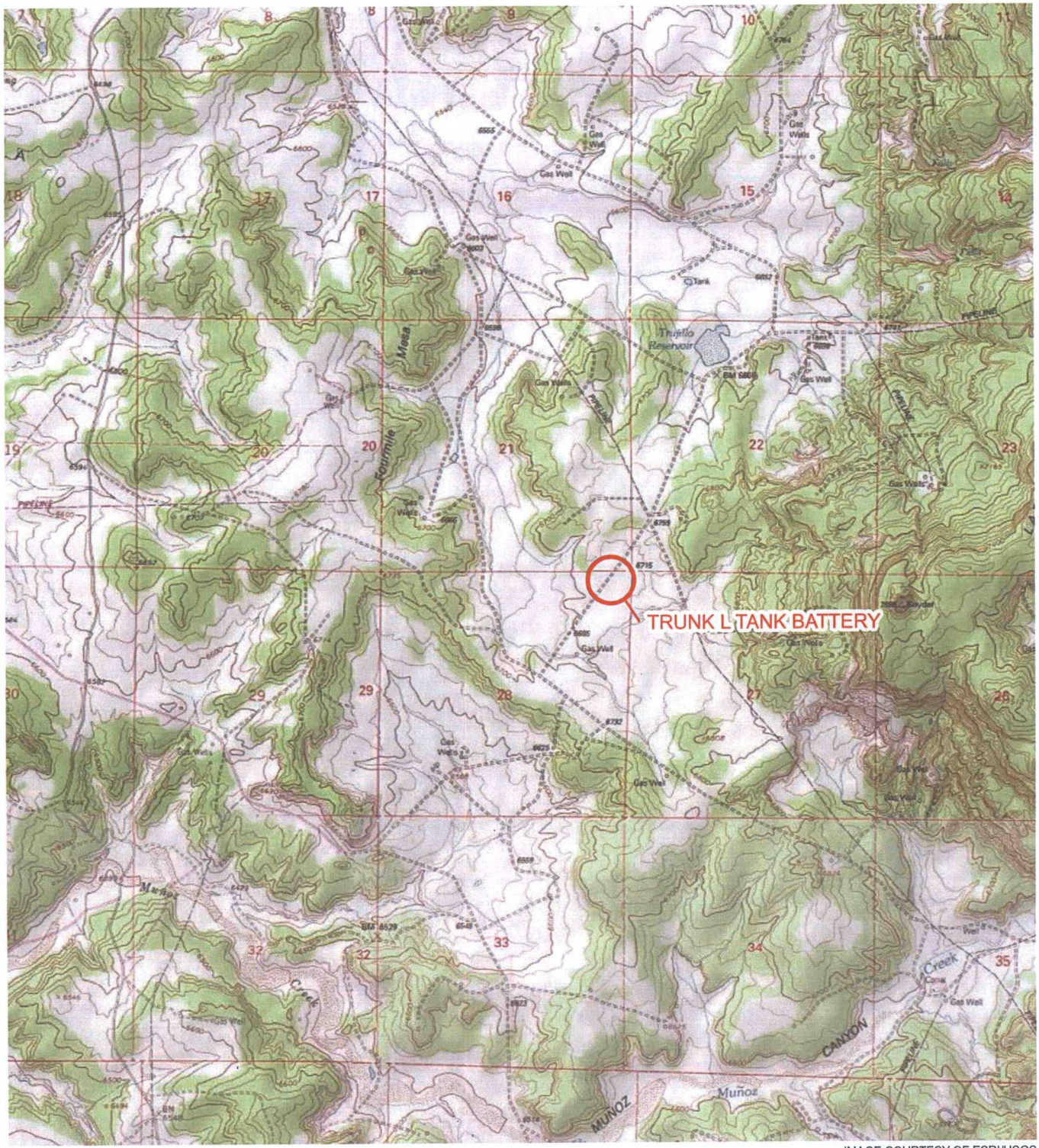


IMAGE COURTESY OF ESRI/USGS

**LEGEND**

SITE LOCATION

0 3,000 6,000

Feet

N

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**

P:\Harvest Four Corners\GIS\MXD\090319022_TRUNK L\090319022_FIG01_SL_2019.mxd

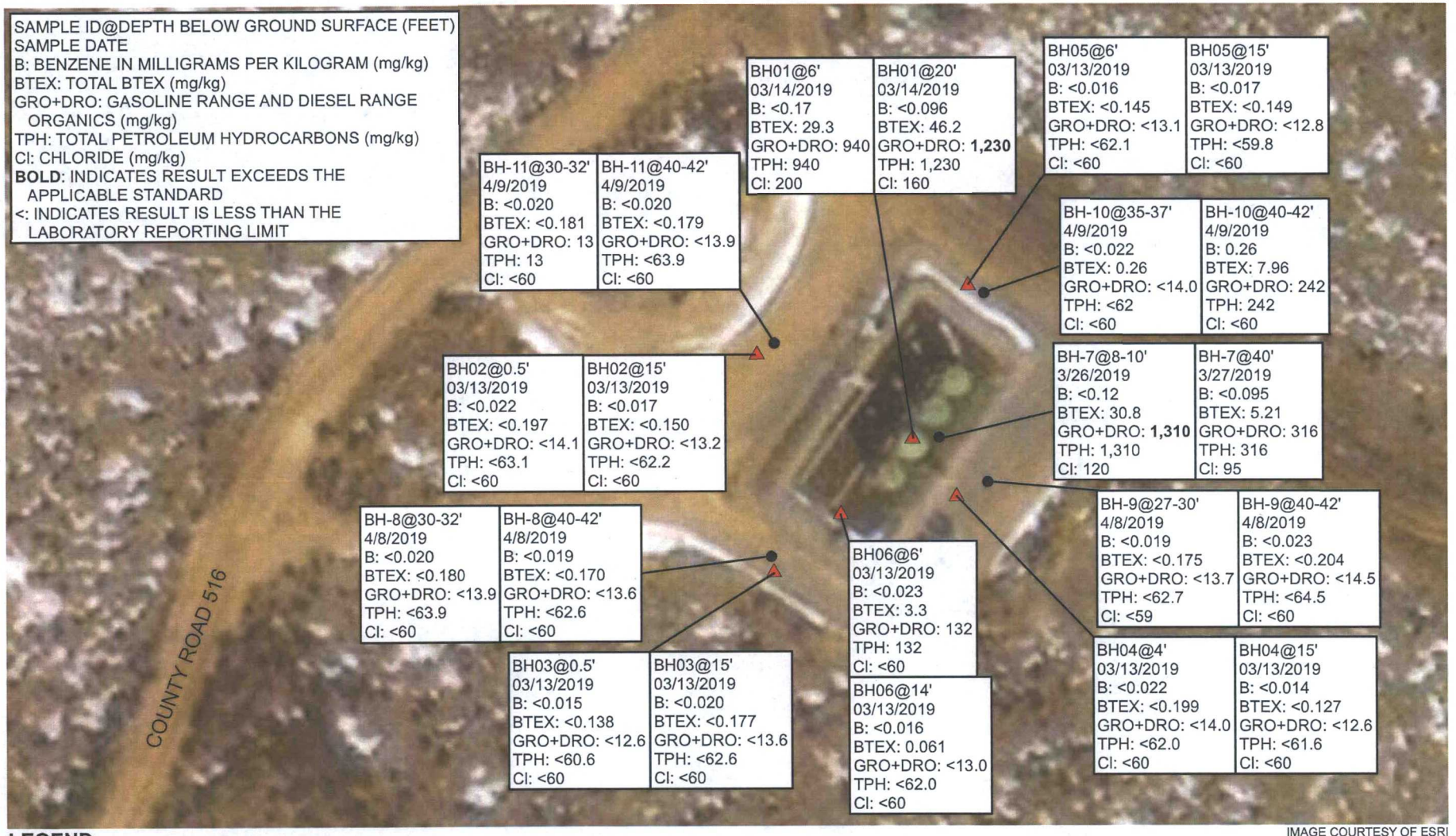


FIGURE 2
SOIL ANALYTICAL RESULTS
TRUNK L TANK BATTERY
NENE SEC 28 T28N R5W
RIO ARRIBA COUNTY, NEW MEXICO
**HARVEST FOUR CORNERS, LLC**

P:\Harvest Four Corners\GIS\MXD\090319022_TRUNK L\090319022_FIG02_SOIL_ANALY_APR_2019_ALL.mxd


IMAGE COURTESY OF ESRI

**LEGEND**

- HOLLOW-STEM BOREHOLE
- HAND AUGER BOREHOLE
- NESTED SOIL VAPOR EXTRACTION WELL (SVE)
- ABOVEGROUND REMEDIATION SYSTEM LINE
- 27.5 FOOT RADIUS OF INFLUENCE
- SOLAR SVE SKID

0 60 120
Feet

N

FIGURE 3
SVE SYSTEM LAYOUT
TRUNK L TANK BATTERY
NENE SEC 28 T28N R5W
RIO ARRIBA COUNTY, NEW MEXICO
**HARVEST FOUR CORNERS, LLC**

P:\Harvest Four Corners\GIS\MXD\090319022_TRUNK L\090319022_FIG03_SVE_SYSTEM LAYOUT_2019.mxd

# TABLES

**TABLE 1**
**SOIL ANALYTICAL RESULTS**

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

| Soil Boring | Sample Date | Depth (feet) | Vapor (ppm) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | Combined GRO, DRO (mg/kg) | MRO (mg/kg) | TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hand Auger Boreholes** | | | | | | | | | | | | | | |
| BH01 | 3/14/2019 | 6 | 2,196 | <0.17 | 5.9 | 1.4 | 22 | 29.3 | 870 | 70 | 940 | <49 | 940 | 200 |
| BH01 | 3/14/2019 | 20 | 1,910 | <0.096 | 13 | 2.2 | 31 | 46.2 | 1,100 | 130 | **1,230** | <48 | 1,230 | 160 |
| BH02 | 3/13/2019 | 0.5 | 0.2 | <0.022 | <0.044 | <0.044 | <0.087 | <0.197 | <4.4 | <9.7 | <14.1 | <49 | <63.1 | <60 |
| BH02 | 3/13/2019 | 15 | 0.0 | <0.017 | <0.033 | <0.033 | <0.067 | <0.150 | <3.3 | <9.9 | <13.2 | <49 | <62.2 | <60 |
| BH03 | 3/13/2019 | 0.5 | 0.4 | <0.015 | <0.031 | <0.031 | <0.061 | <0.138 | <3.1 | <9.5 | <12.6 | <48 | <60.6 | <60 |
| BH03 | 3/13/2019 | 15 | 0.1 | <0.020 | <0.039 | <0.039 | <0.079 | <0.177 | <3.9 | <9.7 | <13.6 | <49 | <62.6 | <60 |
| BH04 | 3/13/2019 | 4 | 0.7 | <0.022 | <0.044 | <0.044 | <0.089 | <0.199 | <4.4 | <9.6 | <14.0 | <48 | <62.0 | <60 |
| BH04 | 3/13/2019 | 15 | 0.1 | <0.014 | <0.028 | <0.028 | <0.057 | <0.127 | <2.8 | <9.8 | <12.6 | <49 | <61.6 | <60 |
| BH05 | 3/13/2019 | 6 | 0.7 | <0.016 | <0.032 | <0.032 | <0.065 | <0.145 | <3.2 | <9.9 | <13.1 | <49 | <62.1 | <60 |
| BH05 | 3/13/2019 | 15 | 0.2 | <0.017 | <0.033 | <0.033 | <0.066 | <0.149 | <3.3 | <9.5 | <12.8 | <47 | <59.8 | <60 |
| BH06 | 3/13/2019 | 6 | 273.5 | <0.023 | 0.39 | 0.11 | 2.8 | 3.3 | 120 | 12 | 132 | <48 | 132 | <60 |
| BH06 | 3/13/2019 | 14 | 7.6 | <0.016 | 0.061 | <0.032 | <0.064 | 0.061 | <3.2 | <9.8 | <13.0 | <49 | <62.0 | <60 |
| **Hollow-stem Boreholes** | | | | | | | | | | | | | | |
| BH-7 | 3/26/2019 | 8-10 | 2,359 | <0.12 | 4.3 | 1.5 | 25 | 30.8 | 1,000 | 310 | **1,310** | <50 | 1,310 | 120 |
| BH-7 | 3/27/2019 | 40 | 1,981 | <0.095 | 1.4 | 0.21 | 3.6 | 5.21 | 230 | 86 | 316 | <48 | 316 | 95 |
| BH-8 | 4/8/2019 | 30-32 | 34.3 | <0.020 | <0.040 | <0.040 | <0.080 | <0.180 | <4.0 | <9.9 | <13.9 | <50 | <63.9 | <60 |
| BH-8 | 4/8/2019 | 40-42 | 10.9 | <0.019 | <0.038 | <0.038 | <0.075 | <0.170 | <3.8 | <9.8 | <13.6 | <49 | <62.6 | <60 |
| BH-9 | 4/8/2019 | 27-30 | 38.2 | <0.019 | <0.039 | <0.039 | <0.078 | <0.175 | <3.9 | <9.8 | <13.7 | <49 | <62.7 | <59 |
| BH-9 | 4/8/2019 | 40-42 | 22.0 | <0.023 | <0.045 | <0.045 | <0.091 | <0.204 | <4.5 | <10 | <14.5 | <50 | <64.5 | <60 |
| BH-10 | 4/9/2019 | 35-37 | 379.4 | <0.022 | 0.13 | <0.044 | 0.13 | 0.26 | <4.4 | <9.6 | <14.0 | <48 | <62 | <60 |
| BH-10 | 4/9/2019 | 40-42 | 404.2 | 0.26 | 2.9 | <0.38 | 4.8 | 7.96 | 210 | 32 | 242 | <49 | 242 | <60 |
| BH-11 | 4/9/2019 | 30-32 | 24.8 | <0.020 | <0.040 | <0.040 | <0.081 | <0.181 | <4.0 | 13 | 13 | <48 | 13 | <60 |
| BH-11 | 4/9/2019 | 40-42 | 21.4 | <0.020 | <0.040 | <0.040 | <0.079 | <0.179 | <4.0 | <9.9 | <13.9 | <50 | <63.9 | <60 |
| **NMOCD Table 1 Closure Criteria** | | | | **10** | **NE** | **NE** | **NE** | **50** | **NE** | **NE** | **1,000** | **NE** | **2,500** | **5,000** |

**NOTES:**

BTEX - benzene, toluene, ethylbenzene, total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NE - not established
NMOCD - New Mexico Oil Conservation Division
ppm - parts per million
TPH- total petroleum hydrocarbons
**Bold** - indicates value exceeds stated NMOCD standard
< -indicates value is less than stated laboratory reporting limit

# ATTACHMENT 1: LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 21, 2019

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

RE: Trunk L Delineation

OrderNo.: 1903784

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/16/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1903784**
Date Reported: **3/21/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-001
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH02 @ 0.5'
**Collection Date:** 3/13/2019 11:30:00 AM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 5:58:45 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 4.4 | | mg/Kg | 1 | 3/18/2019 3:32:05 PM | G58448 |
| Surr: BFB | 103 | 70-130 | | %Rec | 1 | 3/18/2019 3:32:05 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 3/19/2019 9:39:16 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 9:39:16 AM | 43721 |
| Surr: DNOP | 114 | 70-130 | | %Rec | 1 | 3/19/2019 9:39:16 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.022 | | mg/Kg | 1 | 3/18/2019 3:32:05 PM | SLS5844 |
| Toluene | ND | 0.044 | | mg/Kg | 1 | 3/18/2019 3:32:05 PM | SLS5844 |
| Ethylbenzene | ND | 0.044 | | mg/Kg | 1 | 3/18/2019 3:32:05 PM | SLS5844 |
| Xylenes, Total | ND | 0.087 | | mg/Kg | 1 | 3/18/2019 3:32:05 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 97.4 | 70-130 | | %Rec | 1 | 3/18/2019 3:32:05 PM | SLS5844 |
| Surr: Toluene-d8 | 97.7 | 70-130 | | %Rec | 1 | 3/18/2019 3:32:05 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

**Analytical Report**
Lab Order **1903784**
Date Reported: **3/21/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-002
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH02 @ 15'
**Collection Date:** 3/13/2019 12:00:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 6:11:10 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.3 | | mg/Kg | 1 | 3/18/2019 4:00:31 PM | G58448 |
| Surr: BFB | 101 | 70-130 | | %Rec | 1 | 3/18/2019 4:00:31 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 3/19/2019 10:25:00 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 10:25:00 AM | 43721 |
| Surr: DNOP | 111 | 70-130 | | %Rec | 1 | 3/19/2019 10:25:00 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.017 | | mg/Kg | 1 | 3/18/2019 4:00:31 PM | SLS5844 |
| Toluene | ND | 0.033 | | mg/Kg | 1 | 3/18/2019 4:00:31 PM | SLS5844 |
| Ethylbenzene | ND | 0.033 | | mg/Kg | 1 | 3/18/2019 4:00:31 PM | SLS5844 |
| Xylenes, Total | ND | 0.067 | | mg/Kg | 1 | 3/18/2019 4:00:31 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 99.9 | 70-130 | | %Rec | 1 | 3/18/2019 4:00:31 PM | SLS5844 |
| Surr: Toluene-d8 | 94.9 | 70-130 | | %Rec | 1 | 3/18/2019 4:00:31 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-003
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH03 @ 0.5'
**Collection Date:** 3/13/2019 1:06:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 6:23:34 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.1 | | mg/Kg | 1 | 3/18/2019 4:29:02 PM | G58448 |
| Surr: BFB | 104 | 70-130 | | %Rec | 1 | 3/18/2019 4:29:02 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 3/19/2019 10:46:55 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 3/19/2019 10:46:55 AM | 43721 |
| Surr: DNOP | 115 | 70-130 | | %Rec | 1 | 3/19/2019 10:46:55 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.015 | | mg/Kg | 1 | 3/18/2019 4:29:02 PM | SLS5844 |
| Toluene | ND | 0.031 | | mg/Kg | 1 | 3/18/2019 4:29:02 PM | SLS5844 |
| Ethylbenzene | ND | 0.031 | | mg/Kg | 1 | 3/18/2019 4:29:02 PM | SLS5844 |
| Xylenes, Total | ND | 0.061 | | mg/Kg | 1 | 3/18/2019 4:29:02 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 98.7 | 70-130 | | %Rec | 1 | 3/18/2019 4:29:02 PM | SLS5844 |
| Surr: Toluene-d8 | 99.1 | 70-130 | | %Rec | 1 | 3/18/2019 4:29:02 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

**Analytical Report**
Lab Order **1903784**
Date Reported: **3/21/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-004 **Matrix:** MEOH (SOIL)

**Client Sample ID:** BH03 @ 15'
**Collection Date:** 3/13/2019 1:50:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 6:35:59 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.9 | | mg/Kg | 1 | 3/18/2019 4:57:46 PM | G58448 |
| Surr: BFB | 101 | 70-130 | | %Rec | 1 | 3/18/2019 4:57:46 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 3/19/2019 11:09:00 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 11:09:00 AM | 43721 |
| Surr: DNOP | 104 | 70-130 | | %Rec | 1 | 3/19/2019 11:09:00 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.020 | | mg/Kg | 1 | 3/18/2019 4:57:46 PM | SLS5844 |
| Toluene | ND | 0.039 | | mg/Kg | 1 | 3/18/2019 4:57:46 PM | SLS5844 |
| Ethylbenzene | ND | 0.039 | | mg/Kg | 1 | 3/18/2019 4:57:46 PM | SLS5844 |
| Xylenes, Total | ND | 0.079 | | mg/Kg | 1 | 3/18/2019 4:57:46 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 98.7 | 70-130 | | %Rec | 1 | 3/18/2019 4:57:46 PM | SLS5844 |
| Surr: Toluene-d8 | 93.6 | 70-130 | | %Rec | 1 | 3/18/2019 4:57:46 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-005
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH04 @ 4'
**Collection Date:** 3/13/2019 11:20:00 AM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 6:48:23 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 4.4 | | mg/Kg | 1 | 3/18/2019 5:26:25 PM | G58448 |
| Surr: BFB | 101 | 70-130 | | %Rec | 1 | 3/18/2019 5:26:25 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 3/19/2019 11:30:59 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 3/19/2019 11:30:59 AM | 43721 |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 3/19/2019 11:30:59 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.022 | | mg/Kg | 1 | 3/18/2019 5:26:25 PM | SLS5844 |
| Toluene | ND | 0.044 | | mg/Kg | 1 | 3/18/2019 5:26:25 PM | SLS5844 |
| Ethylbenzene | ND | 0.044 | | mg/Kg | 1 | 3/18/2019 5:26:25 PM | SLS5844 |
| Xylenes, Total | ND | 0.089 | | mg/Kg | 1 | 3/18/2019 5:26:25 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 97.8 | 70-130 | | %Rec | 1 | 3/18/2019 5:26:25 PM | SLS5844 |
| Surr: Toluene-d8 | 95.8 | 70-130 | | %Rec | 1 | 3/18/2019 5:26:25 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-006
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH04 @ 15'
**Collection Date:** 3/13/2019 11:40:00 AM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 7:00:48 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 2.8 | | mg/Kg | 1 | 3/18/2019 5:55:01 PM | G58448 |
| Surr: BFB | 97.7 | 70-130 | | %Rec | 1 | 3/18/2019 5:55:01 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 3/19/2019 11:53:06 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 11:53:06 AM | 43721 |
| Surr: DNOP | 110 | 70-130 | | %Rec | 1 | 3/19/2019 11:53:06 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.014 | | mg/Kg | 1 | 3/18/2019 5:55:01 PM | SLS5844 |
| Toluene | ND | 0.028 | | mg/Kg | 1 | 3/18/2019 5:55:01 PM | SLS5844 |
| Ethylbenzene | ND | 0.028 | | mg/Kg | 1 | 3/18/2019 5:55:01 PM | SLS5844 |
| Xylenes, Total | ND | 0.057 | | mg/Kg | 1 | 3/18/2019 5:55:01 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 98.2 | 70-130 | | %Rec | 1 | 3/18/2019 5:55:01 PM | SLS5844 |
| Surr: Toluene-d8 | 92.9 | 70-130 | | %Rec | 1 | 3/18/2019 5:55:01 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Client Sample ID:** BH05 @ 6'
**Project:** Trunk L Delineation
**Collection Date:** 3/13/2019 1:30:00 PM
**Lab ID:** 1903784-007
**Matrix:** MEOH (SOIL)
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 7:38:00 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.2 | | mg/Kg | 1 | 3/18/2019 6:23:33 PM | G58448 |
| Surr: BFB | 100 | 70-130 | | %Rec | 1 | 3/18/2019 6:23:33 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 3/19/2019 10:01:56 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 10:01:56 AM | 43721 |
| Surr: DNOP | 95.7 | 70-130 | | %Rec | 1 | 3/19/2019 10:01:56 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.016 | | mg/Kg | 1 | 3/18/2019 6:23:33 PM | SLS5844 |
| Toluene | ND | 0.032 | | mg/Kg | 1 | 3/18/2019 6:23:33 PM | SLS5844 |
| Ethylbenzene | ND | 0.032 | | mg/Kg | 1 | 3/18/2019 6:23:33 PM | SLS5844 |
| Xylenes, Total | ND | 0.065 | | mg/Kg | 1 | 3/18/2019 6:23:33 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 100 | 70-130 | | %Rec | 1 | 3/18/2019 6:23:33 PM | SLS5844 |
| Surr: Toluene-d8 | 93.7 | 70-130 | | %Rec | 1 | 3/18/2019 6:23:33 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-008
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH05 @ 15'
**Collection Date:** 3/13/2019 2:00:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 7:50:25 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.3 | | mg/Kg | 1 | 3/18/2019 6:51:58 PM | G58448 |
| Surr: BFB | 99.7 | 70-130 | | %Rec | 1 | 3/18/2019 6:51:58 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 3/19/2019 10:25:44 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 3/19/2019 10:25:44 AM | 43721 |
| Surr: DNOP | 97.8 | 70-130 | | %Rec | 1 | 3/19/2019 10:25:44 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.017 | | mg/Kg | 1 | 3/18/2019 6:51:58 PM | SLS5844 |
| Toluene | ND | 0.033 | | mg/Kg | 1 | 3/18/2019 6:51:58 PM | SLS5844 |
| Ethylbenzene | ND | 0.033 | | mg/Kg | 1 | 3/18/2019 6:51:58 PM | SLS5844 |
| Xylenes, Total | ND | 0.066 | | mg/Kg | 1 | 3/18/2019 6:51:58 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | | %Rec | 1 | 3/18/2019 6:51:58 PM | SLS5844 |
| Surr: Toluene-d8 | 96.9 | 70-130 | | %Rec | 1 | 3/18/2019 6:51:58 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-009
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH01 @ 6'
**Collection Date:** 3/14/2019 1:20:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | 200 | 60 | | mg/Kg | 20 | 3/18/2019 8:02:49 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 870 | 35 | | mg/Kg | 10 | 3/18/2019 7:20:34 PM | G58448 |
| Surr: BFB | 102 | 70-130 | | %Rec | 10 | 3/18/2019 7:20:34 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | 70 | 9.8 | | mg/Kg | 1 | 3/19/2019 12:15:08 PM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 12:15:08 PM | 43721 |
| Surr: DNOP | 117 | 70-130 | | %Rec | 1 | 3/19/2019 12:15:08 PM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.17 | | mg/Kg | 10 | 3/18/2019 7:20:34 PM | SLS5844 |
| Toluene | 5.9 | 0.35 | | mg/Kg | 10 | 3/18/2019 7:20:34 PM | SLS5844 |
| Ethylbenzene | 1.4 | 0.35 | | mg/Kg | 10 | 3/18/2019 7:20:34 PM | SLS5844 |
| Xylenes, Total | 22 | 0.69 | | mg/Kg | 10 | 3/18/2019 7:20:34 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 95.9 | 70-130 | | %Rec | 10 | 3/18/2019 7:20:34 PM | SLS5844 |
| Surr: Toluene-d8 | 98.3 | 70-130 | | %Rec | 10 | 3/18/2019 7:20:34 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-010
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH01 @ 20'
**Collection Date:** 3/14/2019 2:40:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | 160 | 60 | | mg/Kg | 20 | 3/18/2019 8:15:14 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 1100 | 19 | | mg/Kg | 5 | 3/18/2019 7:49:12 PM | G58448 |
| Surr: BFB | 103 | 70-130 | | %Rec | 5 | 3/18/2019 7:49:12 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | 130 | 9.7 | | mg/Kg | 1 | 3/19/2019 11:13:33 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 3/19/2019 11:13:33 AM | 43721 |
| Surr: DNOP | 97.6 | 70-130 | | %Rec | 1 | 3/19/2019 11:13:33 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.096 | | mg/Kg | 5 | 3/18/2019 7:49:12 PM | SLS5844 |
| Toluene | 13 | 0.19 | | mg/Kg | 5 | 3/18/2019 7:49:12 PM | SLS5844 |
| Ethylbenzene | 2.2 | 0.19 | | mg/Kg | 5 | 3/18/2019 7:49:12 PM | SLS5844 |
| Xylenes, Total | 31 | 0.38 | | mg/Kg | 5 | 3/18/2019 7:49:12 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | | %Rec | 5 | 3/18/2019 7:49:12 PM | SLS5844 |
| Surr: Toluene-d8 | 99.2 | 70-130 | | %Rec | 5 | 3/18/2019 7:49:12 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-011
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH06 @ 6'
**Collection Date:** 3/14/2019 4:00:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 8:27:38 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 120 | 4.7 | | mg/Kg | 1 | 3/18/2019 8:17:45 PM | G58448 |
| Surr: BFB | 99.7 | 70-130 | | %Rec | 1 | 3/18/2019 8:17:45 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | 12 | 9.7 | | mg/Kg | 1 | 3/19/2019 11:37:30 AM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 3/19/2019 11:37:30 AM | 43721 |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 3/19/2019 11:37:30 AM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 3/18/2019 8:17:45 PM | SLS5844 |
| Toluene | 0.39 | 0.047 | | mg/Kg | 1 | 3/18/2019 8:17:45 PM | SLS5844 |
| Ethylbenzene | 0.11 | 0.047 | | mg/Kg | 1 | 3/18/2019 8:17:45 PM | SLS5844 |
| Xylenes, Total | 2.8 | 0.093 | | mg/Kg | 1 | 3/18/2019 8:17:45 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 97.9 | 70-130 | | %Rec | 1 | 3/18/2019 8:17:45 PM | SLS5844 |
| Surr: Toluene-d8 | 93.5 | 70-130 | | %Rec | 1 | 3/18/2019 8:17:45 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L Delineation
**Lab ID:** 1903784-012
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH06 @ 14'
**Collection Date:** 3/14/2019 4:30:00 PM
**Received Date:** 3/16/2019 10:50:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 3/18/2019 8:40:02 PM | 43728 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 3.2 | | mg/Kg | 1 | 3/18/2019 8:46:11 PM | G58448 |
| Surr: BFB | 101 | 70-130 | | %Rec | 1 | 3/18/2019 8:46:11 PM | G58448 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 3/19/2019 12:01:30 PM | 43721 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 3/19/2019 12:01:30 PM | 43721 |
| Surr: DNOP | 98.5 | 70-130 | | %Rec | 1 | 3/19/2019 12:01:30 PM | 43721 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.016 | | mg/Kg | 1 | 3/18/2019 8:46:11 PM | SLS5844 |
| Toluene | 0.061 | 0.032 | | mg/Kg | 1 | 3/18/2019 8:46:11 PM | SLS5844 |
| Ethylbenzene | ND | 0.032 | | mg/Kg | 1 | 3/18/2019 8:46:11 PM | SLS5844 |
| Xylenes, Total | ND | 0.064 | | mg/Kg | 1 | 3/18/2019 8:46:11 PM | SLS5844 |
| Surr: 4-Bromofluorobenzene | 100 | 70-130 | | %Rec | 1 | 3/18/2019 8:46:11 PM | SLS5844 |
| Surr: Toluene-d8 | 92.9 | 70-130 | | %Rec | 1 | 3/18/2019 8:46:11 PM | SLS5844 |

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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903784**

*21-Mar-19*

**Client:** Harvest
**Project:** Trunk L Delineation

| Sample ID: **MB-43728** | SampType: **mblk** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **43728** | RunNo: **58434** | | | | | | | |
| Prep Date: **3/18/2019** | Analysis Date: **3/18/2019** | SeqNo: **1961763** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: **LCS-43728** | SampType: **lcs** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **43728** | RunNo: **58434** | | | | | | | |
| Prep Date: **3/18/2019** | Analysis Date: **3/18/2019** | SeqNo: **1961764** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.5 | 90 | 110 | | | |

**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 Quanitative 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 Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903784**

*21-Mar-19*

**Client:** Harvest
**Project:** Trunk L Delineation

Sample ID: **LCS-43721** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **43721** RunNo: **58453**
Prep Date: **3/18/2019** Analysis Date: **3/19/2019** SeqNo: **1961839** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 53 | 10 | 50.00 | 0 | 107 | 63.9 | 124 | | | |
| Surr: DNOP | 5.8 | | 5.000 | | 115 | 70 | 130 | | | |

Sample ID: **MB-43721** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **43721** RunNo: **58453**
Prep Date: **3/18/2019** Analysis Date: **3/19/2019** SeqNo: **1961840** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 114 | 70 | 130 | | | |

Sample ID: **MB-43742** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **43742** RunNo: **58454**
Prep Date: **3/18/2019** Analysis Date: **3/19/2019** SeqNo: **1963736** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Sample ID: **LCS-43742** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **43742** RunNo: **58454**
Prep Date: **3/18/2019** Analysis Date: **3/19/2019** SeqNo: **1963737** Units: **%Rec**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.8 | | 5.000 | | 95.1 | 70 | 130 | | | |

**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 Quanitative 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 Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903784**

*21-Mar-19*

**Client:** Harvest

**Project:** Trunk L Delineation

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSS** Batch ID: **SLS58448** RunNo: **58448**

Prep Date: Analysis Date: **3/18/2019** SeqNo: **1961815** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.84 | 0.025 | 1.000 | 0 | 83.6 | 70 | 130 | | | |
| Toluene | 0.94 | 0.050 | 1.000 | 0 | 94.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.46 | | 0.5000 | | 92.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.50 | | 0.5000 | | 99.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 87.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.50 | | 0.5000 | | 99.0 | 70 | 130 | | | |

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBS** Batch ID: **SLS58448** RunNo: **58448**

Prep Date: Analysis Date: **3/18/2019** SeqNo: **1961816** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.46 | | 0.5000 | | 92.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.51 | | 0.5000 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 88.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.50 | | 0.5000 | | 101 | 70 | 130 | | | |

**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 Quanitative 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 Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903784**

*21-Mar-19*

**Client:** Harvest

**Project:** Trunk L Delineation

Sample ID: **1903784-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **BH02 @ 0.5'** Batch ID: **G58448** RunNo: **58448**

Prep Date: Analysis Date: **3/19/2019** SeqNo: **1961600** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 19 | 4.4 | 21.76 | 0 | 88.6 | 68.2 | 135 | | | |
| Surr: BFB | 450 | | 435.2 | | 103 | 70 | 130 | | | |

Sample ID: **1903784-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **BH02 @ 0.5'** Batch ID: **G58448** RunNo: **58448**

Prep Date: Analysis Date: **3/19/2019** SeqNo: **1961601** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 19 | 4.4 | 21.76 | 0 | 85.8 | 68.2 | 135 | 3.21 | 20 | |
| Surr: BFB | 440 | | 435.2 | | 101 | 70 | 130 | 0 | 0 | |

Sample ID: **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **LCSS** Batch ID: **G58448** RunNo: **58448**

Prep Date: Analysis Date: **3/18/2019** SeqNo: **1961613** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 23 | 5.0 | 25.00 | 0 | 92.6 | 70 | 130 | | | |
| Surr: BFB | 510 | | 500.0 | | 101 | 70 | 130 | | | |

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **PBS** Batch ID: **G58448** RunNo: **58448**

Prep Date: Analysis Date: **3/18/2019** SeqNo: **1961614** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 510 | | 500.0 | | 102 | 70 | 130 | | | |

**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 Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: **Harvest** Work Order Number: **1903784** RcptNo: **1**

Received By: **Erin Melendrez** **3/16/2019 10:50:00 AM**

Completed By: **Erin Melendrez** **3/16/2019 12:29:15 PM**

Reviewed By: IO 3/16/19

LB:

## Chain of Custody

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

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 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: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 3.3 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Harvest Midstream

Mailing Address: 1775 Arroyo Drive

Phone #: 505-632-4415

email or Fax#: khong@harvest.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) PDF

Turn-Around Time: Next Day 3/19

☐ Standard ☒ Rush 2 day

Project Name: Trunk L Delineation

Project #: 093019022

Project Manager: Kijun Hong

Sampler: Eric Carroll / Mary Mujica

On Ice: ☒ Yes ☐ No

# of Coolers:

Cooler Temp (including CF): 3 3°c


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 1903784 | BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/13/19 | 1130 | Soil | BH02 @ 0.5' | 1 4oz | cool | -001 | X | X | | | | | X | | | |
| | 1200 | | BH02 @ 15' | | | -002 | X | X | | | | | X | | | |
| | 1300 | | BH03 @ 0.5' | | | -003 | X | X | | | | | X | | | |
| | 1350 | | BH03 @ 15' | | | -004 | X | X | | | | | X | | | |
| | 1120 | | BH04 @ 4' | | | -005 | X | X | | | | | X | | | |
| | 1140 | | BH04 @ 15' | | | -006 | X | X | | | | | X | | | |
| | 1330 | | BH05 @ 6' | | | -007 | X | X | | | | | X | | | |
| | 1400 | | BH05 @ 15' | | | -008 | X | X | | | | | X | | | |
| 3/14/19 | 1320 | | BH01 @ 6' | | | -009 | X | X | | | | | X | | | |
| | 1440 | | BH01 @ 20' | | | -010 | X | X | | | | | X | | | |
| | 1600 | | BH06 @ 6' | | | -011 | X | X | | | | | X | | | |
| | 1630 | | BH06 @ 14' | | | -012 | X | X | | | | | X | | | |

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 3/15/19 | 9:00 | Mary Mujica | | | 3/15/19 | 0900 |
| 3/15/19 | 1515 | | Christine Walker | | 3/15/19 | 1515 |
| 3/15/19 | 1811 | Christine Walker | | Courier | 3/16/19 | 1050 |

Remarks: Please cc: bherb@ltenv.com ecarroll@ltenv.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 16, 2019

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

RE: Trunk L

OrderNo.: 1904418

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/6/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1904418**
Date Reported: **4/16/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904418-001 **Matrix:** SOIL

**Client Sample ID:** BH-7 @ 8-10'
**Collection Date:** 3/26/2019 1:40:00 PM
**Received Date:** 4/6/2019 10:45:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | 120 | 60 | | mg/Kg | 20 | 4/11/2019 1:28:01 PM | 44293 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 1000 | 23 | H | mg/Kg | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Surr: BFB | 104 | 70-130 | H | %Rec | 5 | 4/12/2019 9:28:12 AM | 44226 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | 310 | 10 | | mg/Kg | 1 | 4/11/2019 10:45:43 AM | 44222 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/11/2019 10:45:43 AM | 44222 |
| Surr: DNOP | 110 | 70-130 | | %Rec | 1 | 4/11/2019 10:45:43 AM | 44222 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.12 | H | mg/Kg | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Toluene | 4.3 | 0.23 | H | mg/Kg | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Ethylbenzene | 1.5 | 0.23 | H | mg/Kg | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Xylenes, Total | 25 | 0.46 | H | mg/Kg | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Surr: 1,2-Dichloroethane-d4 | 87.2 | 70-130 | H | %Rec | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Surr: 4-Bromofluorobenzene | 98.7 | 70-130 | H | %Rec | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Surr: Dibromofluoromethane | 118 | 70-130 | H | %Rec | 5 | 4/12/2019 9:28:12 AM | 44226 |
| Surr: Toluene-d8 | 96.7 | 70-130 | H | %Rec | 5 | 4/12/2019 9:28:12 AM | 44226 |

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

**Qualifiers:**

| | |
|---|---|
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904418**

*16-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID | **MB-44293** | SampType: **mblk** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: **44293** | | | RunNo: **59095** | | | | | |
| Prep Date: | **4/11/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989134** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-44293** | SampType: **lcs** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: **44293** | | | RunNo: **59095** | | | | | |
| Prep Date: | **4/11/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989135** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 92.3 | 90 | 110 | | | |

**Qualifiers:**

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904418**

*16-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID **MB-44222** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44222** | RunNo: **59043** |
| Prep Date: **4/9/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987392** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.5 | | 10.00 | | 94.9 | 70 | 130 | | | |

| Sample ID **LCS-44222** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44222** | RunNo: **59043** |
| Prep Date: **4/9/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987409** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 102 | 63.9 | 124 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 98.3 | 70 | 130 | | | |

| Sample ID **MB-44276** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44276** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988005** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 11 | | 10.00 | | 109 | 70 | 130 | | | |

| Sample ID **LCS-44276** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44276** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988539** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.7 | | 5.000 | | 94.5 | 70 | 130 | | | |

| Sample ID **LCS-44265** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44265** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988542** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.6 | | 5.000 | | 91.2 | 70 | 130 | | | |

| Sample ID **MB-44265** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44265** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988543** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 9.6 | | 10.00 | | 95.5 | 70 | 130 | | | |

**Qualifiers:**

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904418**

*16-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID **lcs-44226** | SampType: **LCS** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44226** | RunNo: **59108** |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | SeqNo: **1989810** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.80 | 0.025 | 1.000 | 0 | 80.2 | 70 | 130 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 96.9 | 70 | 130 | | | |
| Ethylbenzene | 0.98 | 0.050 | 1.000 | 0 | 97.9 | 70 | 130 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 98.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.42 | | 0.5000 | | 83.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.49 | | 0.5000 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.45 | | 0.5000 | | 89.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.46 | | 0.5000 | | 92.9 | 70 | 130 | | | |

| Sample ID **mb-44226** | SampType: **MBLK** | TestCode: **EPA Method 8260B: Volatiles Short List** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44226** | RunNo: **59108** |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | SeqNo: **1989811** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.42 | | 0.5000 | | 83.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.49 | | 0.5000 | | 97.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.45 | | 0.5000 | | 90.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 94.7 | 70 | 130 | | | |

**Qualifiers:**

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904418**

*16-Apr-19*

**Client:** Harvest

**Project:** Trunk L

| Sample ID **lcs-44226** | SampType: **LCS** | TestCode: **EPA Method 8015D Mod: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44226** | RunNo: **59108** |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | SeqNo: **1989690** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 101 | 70 | 130 | | | |
| Surr: BFB | 520 | | 500.0 | | 103 | 70 | 130 | | | |

| Sample ID **mb-44226** | SampType: **MBLK** | TestCode: **EPA Method 8015D Mod: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44226** | RunNo: **59108** |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | SeqNo: **1989692** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 500 | | 500.0 | | 100 | 70 | 130 | | | |

**Qualifiers:**

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: Harvest | Work Order Number: 1904418 | RcptNo: 1

Received By: Isaiah Ortiz 4/6/2019 10:45:00 AM I-OK

Completed By: Isaiah Ortiz 4/6/2019 11:44:23 AM I-OK

Reviewed By: YG 4/8/19

Label JDC 4-8-19

## Chain of Custody

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

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 10. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 12. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 13. Is it clear what analyses were requested? | Yes ☑ | No ☐ | JDC |
| 14. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: 4-8-19 |

## Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 5.9 | Good | Yes | | | |
| 2 | 3.2 | Good | Yes | | | |
| 3 | 2.8 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Harvest Four Corners

Kijun Hong

Mailing Address: 1755 Arroyo Dr.

Bloomfield, NM 87413

Phone #: 970-385-1096

email or Fax#: khong@harvest.com

QA/QC Package:

☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☑ EDD (Type) PDF

Turn-Around Time:

☑ Standard ☐ Rush

Project Name: Trunk L

Project #: 09031902.2

Project Manager:

Brooke Herb - LTE

Kijun Hong - Harvest

Sampler: Josh Adams

On Ice: ☑ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CF): 5.9°C, 3.2°C 2.8°


HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 1904418 | (BTEX) MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/26/19 | 1340 | Soil | BH-7 @ 8-10' | 1 1/4 oz | C001 | -001 | X | X | | | | | X | | | |

| Date | Time | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 4-5-19 | 1252 | | | | 4-5-19 | 12:52 |
| 4-5-19 | 14:00 | | | | 4/5/19 | 1406 |

Remarks: cc: jadams@ltenv.com
bherb@ltenv.com
ecarroll@ltenv.com

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.

4/5/19 1819 Christine Walls

courier 4/6/19 1045

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
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*Website: www.hallenvironmental.com*

March 29, 2019

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

RE: Trunk L

OrderNo.: 1903D34

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/28/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1903D34**
Date Reported: **3/29/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1903D34-001 **Matrix:** SOIL

**Client Sample ID:** BH07 @ 40'
**Collection Date:** 3/27/2019 11:30:00 AM
**Received Date:** 3/28/2019 7:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **CJS** | |
| Chloride | 95 | 60 | | mg/Kg | 20 | 3/28/2019 11:39:03 AM | 43933 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 230 | 19 | | mg/Kg | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Surr: BFB | 106 | 70-130 | | %Rec | 5 | 3/28/2019 8:58:52 AM | 43853 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | 86 | 9.5 | | mg/Kg | 1 | 3/28/2019 9:43:19 AM | 43929 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 3/28/2019 9:43:19 AM | 43929 |
| Surr: DNOP | 94.0 | 70-130 | | %Rec | 1 | 3/28/2019 9:43:19 AM | 43929 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.095 | | mg/Kg | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Toluene | 1.4 | 0.19 | | mg/Kg | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Ethylbenzene | 0.21 | 0.19 | | mg/Kg | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Xylenes, Total | 3.6 | 0.38 | | mg/Kg | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Surr: 1,2-Dichloroethane-d4 | 87.7 | 70-130 | | %Rec | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | | %Rec | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Surr: Dibromofluoromethane | 89.9 | 70-130 | | %Rec | 5 | 3/28/2019 8:58:52 AM | 43853 |
| Surr: Toluene-d8 | 90.6 | 70-130 | | %Rec | 5 | 3/28/2019 8:58:52 AM | 43853 |

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

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D34**

*29-Mar-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **MB-43933** | SampType: **mblk** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **43933** | | | RunNo: **58732** | | | | | |
| Prep Date: **3/28/2019** | Analysis Date: **3/28/2019** | | | SeqNo: **1973292** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: **LCS-43933** | SampType: **lcs** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **43933** | | | RunNo: **58732** | | | | | |
| Prep Date: **3/28/2019** | Analysis Date: **3/28/2019** | | | SeqNo: **1973293** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.4 | 90 | 110 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D34**

*29-Mar-19*

**Client:** Harvest

**Project:** Trunk L

| Sample ID: **LCS-43929** | SampType: **LCS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **43929** | | | RunNo: **58701** | | | | | | |
| Prep Date: **3/28/2019** | Analysis Date: **3/28/2019** | | | SeqNo: **1971593** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 42 | 10 | 50.00 | 0 | 83.4 | 63.9 | 124 | | | |
| Surr: DNOP | 4.3 | | 5.000 | | 85.7 | 70 | 130 | | | |

| Sample ID: **MB-43929** | SampType: **MBLK** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **43929** | | | RunNo: **58701** | | | | | | |
| Prep Date: **3/28/2019** | Analysis Date: **3/28/2019** | | | SeqNo: **1971594** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.3 | | 10.00 | | 93.3 | 70 | 130 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D34**

*29-Mar-19*

**Client:** Harvest

**Project:** Trunk L

| Sample ID: **lcs-43853** | SampType: **LCS** | | | TestCode: **EPA Method 8260B: Volatiles Short List** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **43853** | | | RunNo: **58659** | | | | | |
| Prep Date: **3/25/2019** | Analysis Date: **3/27/2019** | | | SeqNo: **1970988** | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.90 | 0.025 | 1.000 | 0 | 90.0 | 70 | 130 | | | |
| Toluene | 0.94 | 0.050 | 1.000 | 0 | 93.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 85.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.53 | | 0.5000 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 87.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.44 | | 0.5000 | | 88.6 | 70 | 130 | | | |

| Sample ID: **mb-43853** | SampType: **MBLK** | | | TestCode: **EPA Method 8260B: Volatiles Short List** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **43853** | | | RunNo: **58659** | | | | | |
| Prep Date: **3/25/2019** | Analysis Date: **3/27/2019** | | | SeqNo: **1970989** | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.42 | | 0.5000 | | 84.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.54 | | 0.5000 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 88.3 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.44 | | 0.5000 | | 87.9 | 70 | 130 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D34**

*29-Mar-19*

**Client:** Harvest

**Project:** Trunk L

Sample ID: **lcs-43853** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **LCSS** Batch ID: **43853** RunNo: **58659**

Prep Date: **3/25/2019** Analysis Date: **3/27/2019** SeqNo: **1970937** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 22 | 5.0 | 25.00 | 0 | 88.2 | 70 | 130 | | | |
| Surr: BFB | 540 | | 500.0 | | 108 | 70 | 130 | | | |

Sample ID: **mb-43853** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **PBS** Batch ID: **43853** RunNo: **58659**

Prep Date: **3/25/2019** Analysis Date: **3/27/2019** SeqNo: **1970938** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 540 | | 500.0 | | 108 | 70 | 130 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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*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: 1903D34 | RcptNo: 1

Received By: Anne Thorne 3/28/2019 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 3/28/2019 7:43:17 AM Anne Thorne

Reviewed By: JO 3/28/19

Labeled by: AT 03/28/19

## Chain of Custody

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

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 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: _____

## Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Harvest Four Corners

Kijun Hong

Mailing Address:

Phone #: 970-385-1096

email or Fax#: khong@harvest.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) PDF

Turn-Around Time: Same Day

☐ Standard ☒ Rush 3/28/2019

Project Name: Trunk L

Project #:

Project Manager:
Kijun Hong - Harvest
Brooke Herb - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.0


HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 1903P34 | BTEX / ~~MTBE~~ / ~~TMB's~~ (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | ~~Cl, F, Br, NO3, NO2, PO4, SO4~~ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/27/19 | 1130 | Soil | BH07 @ 40' | 1 4oz Metal Tin | cool | 001 | X | X | | | | | X | | | |

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 3/27/19 | 1410 | | Christy Walker | | 3/27/19 | 1410 |
| 3/27/19 | 1812 | Christy Walker | | | 03/28/19 | 0700 |

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 12, 2019

Kijun Hong
Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL:
FAX

RE: Trunk L

OrderNo.: 1904474

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/9/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904474-001
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH-8@30-32'
**Collection Date:** 4/8/2019 11:00:00 AM
**Received Date:** 4/9/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/9/2019 11:57:48 AM | 44224 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 4/10/2019 3:40:26 PM | 44222 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/10/2019 3:40:26 PM | 44222 |
| Surr: DNOP | 129 | 70-130 | | %Rec | 1 | 4/10/2019 3:40:26 PM | 44222 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.0 | | mg/Kg | 1 | 4/9/2019 11:17:42 AM | G59017 |
| Surr: BFB | 91.8 | 73.8-119 | | %Rec | 1 | 4/9/2019 11:17:42 AM | G59017 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.020 | | mg/Kg | 1 | 4/9/2019 11:17:42 AM | B59017 |
| Toluene | ND | 0.040 | | mg/Kg | 1 | 4/9/2019 11:17:42 AM | B59017 |
| Ethylbenzene | ND | 0.040 | | mg/Kg | 1 | 4/9/2019 11:17:42 AM | B59017 |
| Xylenes, Total | ND | 0.080 | | mg/Kg | 1 | 4/9/2019 11:17:42 AM | B59017 |
| Surr: 4-Bromofluorobenzene | 92.1 | 80-120 | | %Rec | 1 | 4/9/2019 11:17:42 AM | B59017 |

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

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904474-002
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH-8@40-42'
**Collection Date:** 4/8/2019 11:30:00 AM
**Received Date:** 4/9/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/9/2019 12:10:12 PM | 44224 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **CLP** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 4/10/2019 4:04:33 PM | 44222 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/10/2019 4:04:33 PM | 44222 |
| Surr: DNOP | 123 | 70-130 | | %Rec | 1 | 4/10/2019 4:04:33 PM | 44222 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 3.8 | | mg/Kg | 1 | 4/9/2019 12:27:59 PM | G59017 |
| Surr: BFB | 86.3 | 73.8-119 | | %Rec | 1 | 4/9/2019 12:27:59 PM | G59017 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.019 | | mg/Kg | 1 | 4/9/2019 12:27:59 PM | B59017 |
| Toluene | ND | 0.038 | | mg/Kg | 1 | 4/9/2019 12:27:59 PM | B59017 |
| Ethylbenzene | ND | 0.038 | | mg/Kg | 1 | 4/9/2019 12:27:59 PM | B59017 |
| Xylenes, Total | ND | 0.075 | | mg/Kg | 1 | 4/9/2019 12:27:59 PM | B59017 |
| Surr: 4-Bromofluorobenzene | 86.8 | 80-120 | | %Rec | 1 | 4/9/2019 12:27:59 PM | B59017 |

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

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904474-003
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH-9@27-30'
**Collection Date:** 4/8/2019 2:30:00 PM
**Received Date:** 4/9/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 59 | | mg/Kg | 20 | 4/9/2019 12:22:36 PM | 44224 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 4/10/2019 4:14:28 PM | 44222 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/10/2019 4:14:28 PM | 44222 |
| Surr: DNOP | 117 | 70-130 | | %Rec | 1 | 4/10/2019 4:14:28 PM | 44222 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 3.9 | | mg/Kg | 1 | 4/9/2019 1:38:08 PM | G59017 |
| Surr: BFB | 86.8 | 73.8-119 | | %Rec | 1 | 4/9/2019 1:38:08 PM | G59017 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.019 | | mg/Kg | 1 | 4/9/2019 1:38:08 PM | B59017 |
| Toluene | ND | 0.039 | | mg/Kg | 1 | 4/9/2019 1:38:08 PM | B59017 |
| Ethylbenzene | ND | 0.039 | | mg/Kg | 1 | 4/9/2019 1:38:08 PM | B59017 |
| Xylenes, Total | ND | 0.078 | | mg/Kg | 1 | 4/9/2019 1:38:08 PM | B59017 |
| Surr: 4-Bromofluorobenzene | 87.2 | 80-120 | | %Rec | 1 | 4/9/2019 1:38:08 PM | B59017 |

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

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904474-004
**Matrix:** MEOH (SOIL)
**Client Sample ID:** BH-9@40-42'
**Collection Date:** 4/8/2019 2:35:00 PM
**Received Date:** 4/9/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/9/2019 12:35:01 PM | 44224 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 4/10/2019 4:38:59 PM | 44222 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/10/2019 4:38:59 PM | 44222 |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 4/10/2019 4:38:59 PM | 44222 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.5 | | mg/Kg | 1 | 4/9/2019 2:01:32 PM | G59017 |
| Surr: BFB | 88.8 | 73.8-119 | | %Rec | 1 | 4/9/2019 2:01:32 PM | G59017 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 4/9/2019 2:01:32 PM | B59017 |
| Toluene | ND | 0.045 | | mg/Kg | 1 | 4/9/2019 2:01:32 PM | B59017 |
| Ethylbenzene | ND | 0.045 | | mg/Kg | 1 | 4/9/2019 2:01:32 PM | B59017 |
| Xylenes, Total | ND | 0.091 | | mg/Kg | 1 | 4/9/2019 2:01:32 PM | B59017 |
| Surr: 4-Bromofluorobenzene | 88.9 | 80-120 | | %Rec | 1 | 4/9/2019 2:01:32 PM | B59017 |

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

**Qualifiers:**

| | | | |
|---|---|---|---|
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified at testcode |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **MB-44224** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **44224** | RunNo: **59030** | | | | | | | |
| Prep Date: **4/9/2019** | Analysis Date: **4/9/2019** | SeqNo: **1986298** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: **LCS-44224** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **44224** | RunNo: **59030** | | | | | | | |
| Prep Date: **4/9/2019** | Analysis Date: **4/9/2019** | SeqNo: **1986300** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.2 | 90 | 110 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **MB-44222** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44222** | RunNo: **59043** |
| Prep Date: **4/9/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987392** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.5 | | 10.00 | | 94.9 | 70 | 130 | | | |

| Sample ID: **LCS-44222** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44222** | RunNo: **59043** |
| Prep Date: **4/9/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987409** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 102 | 63.9 | 124 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 98.3 | 70 | 130 | | | |

| Sample ID: **MB-44276** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44276** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988005** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 11 | | 10.00 | | 109 | 70 | 130 | | | |

| Sample ID: **LCS-44276** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44276** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988539** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.7 | | 5.000 | | 94.5 | 70 | 130 | | | |

| Sample ID: **LCS-44265** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44265** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988542** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.6 | | 5.000 | | 91.2 | 70 | 130 | | | |

| Sample ID: **MB-44265** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44265** | RunNo: **59065** |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | SeqNo: **1988543** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 9.6 | | 10.00 | | 95.5 | 70 | 130 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **1904474-001AMS** | SampType: **MS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **BH-8@30-32'** | Batch ID: **44222** | | | RunNo: **59043** | | | | | | |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989010** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 9.7 | 48.64 | 0 | 104 | 53.5 | 126 | | | |
| Surr: DNOP | 5.2 | | 4.864 | | 107 | 70 | 130 | | | |

| Sample ID: **1904474-001AMSD** | SampType: **MSD** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **BH-8@30-32'** | Batch ID: **44222** | | | RunNo: **59043** | | | | | | |
| Prep Date: **4/9/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989011** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 60 | 9.7 | 48.26 | 0 | 124 | 53.5 | 126 | 16.4 | 21.7 | |
| Surr: DNOP | 6.2 | | 4.826 | | 128 | 70 | 130 | 0 | 0 | |

| Sample ID: **MB-44266** | SampType: **MBLK** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **44266** | | | RunNo: **59043** | | | | | | |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989013** | | Units: **%Rec** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 11 | | 10.00 | | 106 | 70 | 130 | | | |

| Sample ID: **LCS-44266** | SampType: **LCS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **44266** | | | RunNo: **59043** | | | | | | |
| Prep Date: **4/10/2019** | Analysis Date: **4/11/2019** | | | SeqNo: **1989014** | | Units: **%Rec** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.7 | | 5.000 | | 94.0 | 70 | 130 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **RB** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **G59017** | RunNo: **59017** | | | | | | | |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985583** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 890 | | 1000 | | 88.7 | 73.8 | 119 | | | |

| Sample ID: **2.5UG GRO LCS** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **G59017** | RunNo: **59017** | | | | | | | |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985584** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 102 | 80.1 | 123 | | | |
| Surr: BFB | 990 | | 1000 | | 99.3 | 73.8 | 119 | | | |

| Sample ID: **1904474-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **BH-8@30-32'** | Batch ID: **G59017** | RunNo: **59017** | | | | | | | |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985586** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 21 | 4.0 | 19.90 | 0 | 103 | 69.1 | 142 | | | |
| Surr: BFB | 820 | | 796.2 | | 103 | 73.8 | 119 | | | |

| Sample ID: **1904474-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **BH-8@30-32'** | Batch ID: **G59017** | RunNo: **59017** | | | | | | | |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985587** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 20 | 4.0 | 19.90 | 0 | 100 | 69.1 | 142 | 2.79 | 20 | |
| Surr: BFB | 800 | | 796.2 | | 101 | 73.8 | 119 | 0 | 0 | |

| Sample ID: **MB-44121** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **44121** | RunNo: **59017** | | | | | | | |
| Prep Date: **4/4/2019** | Analysis Date: **4/9/2019** | SeqNo: **1985591** | Units: **%Rec** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 900 | | 1000 | | 89.6 | 73.8 | 119 | | | |

| Sample ID: **LCS-44121** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **44121** | RunNo: **59017** | | | | | | | |
| Prep Date: **4/4/2019** | Analysis Date: **4/9/2019** | SeqNo: **1985592** | Units: **%Rec** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1000 | | 1000 | | 104 | 73.8 | 119 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **B59017** | RunNo: **59017** |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985631** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.88 | | 1.000 | | 87.6 | 80 | 120 | | | |

| Sample ID: **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **B59017** | RunNo: **59017** |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985632** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.90 | 0.025 | 1.000 | 0 | 90.4 | 80 | 120 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 94.9 | 80 | 120 | | | |
| Ethylbenzene | 0.94 | 0.050 | 1.000 | 0 | 94.4 | 80 | 120 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 95.5 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.92 | | 1.000 | | 91.5 | 80 | 120 | | | |

| Sample ID: **1904474-002AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **BH-8@40-42'** | Batch ID: **B59017** | RunNo: **59017** |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985636** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.68 | 0.019 | 0.7513 | 0.008039 | 88.8 | 63.9 | 127 | | | |
| Toluene | 0.72 | 0.038 | 0.7513 | 0.01976 | 92.8 | 69.9 | 131 | | | |
| Ethylbenzene | 0.69 | 0.038 | 0.7513 | 0 | 92.4 | 71 | 132 | | | |
| Xylenes, Total | 2.1 | 0.075 | 2.254 | 0.02825 | 93.7 | 71.8 | 131 | | | |
| Surr: 4-Bromofluorobenzene | 0.71 | | 0.7513 | | 94.0 | 80 | 120 | | | |

| Sample ID: **1904474-002AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **BH-8@40-42'** | Batch ID: **B59017** | RunNo: **59017** |
| Prep Date: | Analysis Date: **4/9/2019** | SeqNo: **1985637** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.68 | 0.019 | 0.7513 | 0.008039 | 88.8 | 63.9 | 127 | 0.0105 | 20 | |
| Toluene | 0.71 | 0.038 | 0.7513 | 0.01976 | 91.8 | 69.9 | 131 | 0.990 | 20 | |
| Ethylbenzene | 0.69 | 0.038 | 0.7513 | 0 | 92.5 | 71 | 132 | 0.0439 | 20 | |
| Xylenes, Total | 2.1 | 0.075 | 2.254 | 0.02825 | 92.8 | 71.8 | 131 | 1.02 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.66 | | 0.7513 | | 88.2 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904474**

*12-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **MB-44121** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44121** | RunNo: **59017** |
| Prep Date: **4/4/2019** | Analysis Date: **4/9/2019** | SeqNo: **1985640** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.90 | | 1.000 | | 90.1 | 80 | 120 | | | |

| Sample ID: **LCS-44121** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44121** | RunNo: **59017** |
| Prep Date: **4/4/2019** | Analysis Date: **4/9/2019** | SeqNo: **1985641** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.91 | | 1.000 | | 90.9 | 80 | 120 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: **Harvest** Work Order Number: **1904474** RcptNo: **1**

Received By: **Yazmine Garduno** **4/9/2019 8:10:00 AM** Yazmine Garduno

Completed By: **Yazmine Garduno** **4/9/2019 8:22:39 AM** Yazmine Garduno

Reviewed By: DAD 4/9/19

LB: YG 4/9/19

## Chain of Custody

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

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 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: YG 4/9/19

## Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 4.4 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Harvest Four Corners

Kijun Hong

Mailing Address: 1735 Arroya Dr

Bloomfield, NM 87413

Phone #: 505-632-4475

email or Fax#: KHong@harvestmidstream.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☒ EDD (Type) PDF

Turn-Around Time:

☐ Standard ☒ Rush Next Day

Project Name: Trunk L

Project #:

Project Manager: Brooke Herb

Sampler: Josh Adams

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.4°

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1904474 | BTEX + ~~MTBE~~ + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F, Cl, $NO_3$, $NO_2$, $PO_4$, $SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-8-19 | 1100 | soil | BH-8 @ 30-32' | (1) 4oz | cool | -001 | X | | X | | | | | X | | | | |
| | 1130 | | BH-8 @ 40-42' | | | -002 | X | | X | | | | | X | | | | |
| | 1430 | | BH-9 @ 27-30' | | | -003 | X | | X | | | | | X | | | | |
| | 1435 | | BH-9 @ 40-42' | | | -004 | X | | X | | | | | X | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 4-8-19 | 1703 | | | 4/8/19 | 1702 |
| 4/8/19 | 1819 | | courier | 4/9/19 | 8:10 |

Remarks:

cc: bherb@henv.com
jadams@henv.com
ecarroll@henv.com

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

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

April 11, 2019

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

RE: Trunk L OrderNo.: 1904537

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/10/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1904537**
Date Reported: **4/11/2019**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904537-001 **Matrix:** SOIL

**Client Sample ID:** BH-10 @ 35-37'
**Collection Date:** 4/9/2019 10:30:00 AM
**Received Date:** 4/10/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/10/2019 10:54:55 AM | 44254 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 4.4 | | mg/Kg | 1 | 4/10/2019 11:46:14 AM | GS5903( |
| Surr: BFB | 99.9 | 70-130 | | %Rec | 1 | 4/10/2019 11:46:14 AM | GS5903( |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 4/10/2019 3:49:09 PM | 44249 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 4/10/2019 3:49:09 PM | 44249 |
| Surr: DNOP | 95.1 | 70-130 | | %Rec | 1 | 4/10/2019 3:49:09 PM | 44249 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.022 | | mg/Kg | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Toluene | 0.13 | 0.044 | | mg/Kg | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Ethylbenzene | ND | 0.044 | | mg/Kg | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Xylenes, Total | 0.13 | 0.088 | | mg/Kg | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Surr: 1,2-Dichloroethane-d4 | 86.2 | 70-130 | | %Rec | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Surr: 4-Bromofluorobenzene | 98.1 | 70-130 | | %Rec | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Surr: Dibromofluoromethane | 89.2 | 70-130 | | %Rec | 1 | 4/10/2019 11:46:14 AM | R59036 |
| Surr: Toluene-d8 | 95.0 | 70-130 | | %Rec | 1 | 4/10/2019 11:46:14 AM | R59036 |

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

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904537-002 **Matrix:** SOIL

**Client Sample ID:** BH-10 @ 40-42'
**Collection Date:** 4/9/2019 10:35:00 AM
**Received Date:** 4/10/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/10/2019 11:07:19 AM | 44254 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | 210 | 38 | | mg/Kg | 10 | 4/10/2019 2:37:55 PM | GS5903( |
| Surr: BFB | 102 | 70-130 | | %Rec | 10 | 4/10/2019 2:37:55 PM | GS5903( |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | 32 | 9.7 | | mg/Kg | 1 | 4/10/2019 4:11:20 PM | 44249 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 4/10/2019 4:11:20 PM | 44249 |
| Surr: DNOP | 103 | 70-130 | | %Rec | 1 | 4/10/2019 4:11:20 PM | 44249 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | 0.26 | 0.19 | | mg/Kg | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Toluene | 2.9 | 0.38 | | mg/Kg | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Ethylbenzene | ND | 0.38 | | mg/Kg | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Xylenes, Total | 4.8 | 0.77 | | mg/Kg | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Surr: 1,2-Dichloroethane-d4 | 87.7 | 70-130 | | %Rec | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Surr: 4-Bromofluorobenzene | 99.2 | 70-130 | | %Rec | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Surr: Dibromofluoromethane | 90.9 | 70-130 | | %Rec | 10 | 4/10/2019 2:37:55 PM | R59036 |
| Surr: Toluene-d8 | 96.6 | 70-130 | | %Rec | 10 | 4/10/2019 2:37:55 PM | R59036 |

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

**Qualifiers:**

| | | | |
|---|---|---|---|
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904537-003 **Matrix:** SOIL

**Client Sample ID:** BH-11 @ 30-32'
**Collection Date:** 4/9/2019 1:40:00 PM
**Received Date:** 4/10/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/10/2019 11:19:44 AM | 44254 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 4.0 | | mg/Kg | 1 | 4/10/2019 3:06:24 PM | GS5903( |
| Surr: BFB | 104 | 70-130 | | %Rec | 1 | 4/10/2019 3:06:24 PM | GS5903( |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | 13 | 9.6 | | mg/Kg | 1 | 4/10/2019 3:25:44 PM | 44249 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 4/10/2019 3:25:44 PM | 44249 |
| Surr: DNOP | 112 | 70-130 | | %Rec | 1 | 4/10/2019 3:25:44 PM | 44249 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.020 | | mg/Kg | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Toluene | ND | 0.040 | | mg/Kg | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Ethylbenzene | ND | 0.040 | | mg/Kg | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Xylenes, Total | ND | 0.081 | | mg/Kg | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Surr: 1,2-Dichloroethane-d4 | 87.5 | 70-130 | | %Rec | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | | %Rec | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Surr: Dibromofluoromethane | 87.9 | 70-130 | | %Rec | 1 | 4/10/2019 3:06:24 PM | R59036 |
| Surr: Toluene-d8 | 93.8 | 70-130 | | %Rec | 1 | 4/10/2019 3:06:24 PM | R59036 |

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

**Qualifiers:**

| | | | |
|---|---|---|---|
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified at testcode |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Harvest
**Project:** Trunk L
**Lab ID:** 1904537-004 **Matrix:** SOIL

**Client Sample ID:** BH-11 @ 40-42'
**Collection Date:** 4/9/2019 1:45:00 PM
**Received Date:** 4/10/2019 8:10:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **smb** | |
| Chloride | ND | 60 | | mg/Kg | 20 | 4/10/2019 11:32:08 AM | 44254 |
| **EPA METHOD 8015D MOD: GASOLINE RANGE** | | | | | | Analyst: **RAA** | |
| Gasoline Range Organics (GRO) | ND | 4.0 | | mg/Kg | 1 | 4/10/2019 3:34:53 PM | GS5903( |
| Surr: BFB | 106 | 70-130 | | %Rec | 1 | 4/10/2019 3:34:53 PM | GS5903( |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **lrm** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 4/10/2019 3:50:03 PM | 44249 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 4/10/2019 3:50:03 PM | 44249 |
| Surr: DNOP | 114 | 70-130 | | %Rec | 1 | 4/10/2019 3:50:03 PM | 44249 |
| **EPA METHOD 8260B: VOLATILES SHORT LIST** | | | | | | Analyst: **RAA** | |
| Benzene | ND | 0.020 | | mg/Kg | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Toluene | ND | 0.040 | | mg/Kg | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Ethylbenzene | ND | 0.040 | | mg/Kg | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Xylenes, Total | ND | 0.079 | | mg/Kg | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Surr: 1,2-Dichloroethane-d4 | 87.4 | 70-130 | | %Rec | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | | %Rec | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Surr: Dibromofluoromethane | 92.1 | 70-130 | | %Rec | 1 | 4/10/2019 3:34:53 PM | R59036 |
| Surr: Toluene-d8 | 94.5 | 70-130 | | %Rec | 1 | 4/10/2019 3:34:53 PM | R59036 |

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

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904537**

*11-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **MB-44254** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44254** | RunNo: **59038** |
| Prep Date: **4/10/2019** | Analysis Date: **4/10/2019** | SeqNo: **1988133** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: **LCS-44254** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44254** | RunNo: **59038** |
| Prep Date: **4/10/2019** | Analysis Date: **4/10/2019** | SeqNo: **1988134** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.4 | 90 | 110 | | | |

**Qualifiers:**

| | |
|---|---|
| H | Holding times for preparation or analysis exceeded |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of range due to dilution or matrix |
| ND | Not Detected at the Reporting Limit |
| RL | Reporting Detection Limit |
| W | Sample container temperature is out of limit as specified at testcode |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904537**

*11-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **LCS-44249** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **44249** | RunNo: **59045** |
| Prep Date: **4/10/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987412** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 103 | 63.9 | 124 | | | |
| Surr: DNOP | 4.6 | | 5.000 | | 92.2 | 70 | 130 | | | |

| Sample ID: **MB-44249** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **44249** | RunNo: **59045** |
| Prep Date: **4/10/2019** | Analysis Date: **4/10/2019** | SeqNo: **1987413** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 106 | 70 | 130 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904537**

*11-Apr-19*

**Client:** Harvest
**Project:** Trunk L

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **R59036** RunNo: **59036**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987135** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.79 | 0.025 | 1.000 | 0 | 79.3 | 70 | 130 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 100 | 70 | 130 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 98.9 | 70 | 130 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 85.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.50 | | 0.5000 | | 99.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 87.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.49 | | 0.5000 | | 97.6 | 70 | 130 | | | |

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **R59036** RunNo: **59036**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987137** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.43 | | 0.5000 | | 85.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.53 | | 0.5000 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.44 | | 0.5000 | | 87.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.49 | | 0.5000 | | 97.8 | 70 | 130 | | | |

Sample ID: **1904537-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BH-10 @ 35-37'** Batch ID: **R59036** RunNo: **59036**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988420** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.75 | 0.022 | 0.8787 | 0.01556 | 83.4 | 68.9 | 131 | | | |
| Toluene | 0.99 | 0.044 | 0.8787 | 0.1281 | 98.1 | 64.3 | 137 | | | |
| Ethylbenzene | 0.87 | 0.044 | 0.8787 | 0 | 99.5 | 70 | 130 | | | |
| Xylenes, Total | 2.8 | 0.088 | 2.636 | 0.1253 | 99.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.38 | | 0.4394 | | 86.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.45 | | 0.4394 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.40 | | 0.4394 | | 91.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.42 | | 0.4394 | | 94.5 | 70 | 130 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904537**

*11-Apr-19*

**Client:** Harvest
**Project:** Trunk L

Sample ID: **1904537-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BH-10 @ 35-37'** Batch ID: **R59036** RunNo: **59036**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988421** Units: **mg/Kg**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.70 | 0.022 | 0.8787 | 0.01556 | 77.8 | 68.9 | 131 | 6.88 | 20 | |
| Toluene | 0.95 | 0.044 | 0.8787 | 0.1281 | 93.7 | 64.3 | 137 | 3.92 | 20 | |
| Ethylbenzene | 0.84 | 0.044 | 0.8787 | 0 | 95.8 | 70 | 130 | 3.76 | 0 | |
| Xylenes, Total | 2.7 | 0.088 | 2.636 | 0.1253 | 95.8 | 70 | 130 | 3.66 | 0 | |
| Surr: 1,2-Dichloroethane-d4 | 0.38 | | 0.4394 | | 86.4 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 0.44 | | 0.4394 | | 99.8 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 0.39 | | 0.4394 | | 89.4 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 0.42 | | 0.4394 | | 94.8 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1904537**

*11-Apr-19*

**Client:** Harvest
**Project:** Trunk L

| Sample ID: **2.5ug gro lcs** | SampType: **LCS** | | | TestCode: **EPA Method 8015D Mod: Gasoline Range** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **GS59036** | | | RunNo: **59036** | | | | | | |
| Prep Date: | Analysis Date: **4/10/2019** | | | SeqNo: **1987141** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23 | 5.0 | 25.00 | 0 | 93.4 | 70 | 130 | | | |
| Surr: BFB | 500 | | 500.0 | | 101 | 70 | 130 | | | |

| Sample ID: **rb** | SampType: **MBLK** | | | TestCode: **EPA Method 8015D Mod: Gasoline Range** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **GS59036** | | | RunNo: **59036** | | | | | | |
| Prep Date: | Analysis Date: **4/10/2019** | | | SeqNo: **1987143** | | Units: **mg/Kg** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 520 | | 500.0 | | 104 | 70 | 130 | | | |

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: Harvest | Work Order Number: 1904537 | RcptNo: 1

Received By: **Anne Thorne** 4/10/2019 8:10:00 AM Anne Thorne

Completed By: **Anne Thorne** 4/10/2019 8:16:10 AM Anne Thorne

Reviewed By: YG 4/10/19

Labeled by: AT 04/10/19

## Chain of Custody

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

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 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: 04/10/19 (<2 or >12 unless noted)

Adjusted? AT

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 °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |
| 2 | 1.0 | Good | Yes | | | |
| 3 | 1.0 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Harvest Four Corners

Mailing Address: 1755 Arroyo Dr
Bloomfield, NM 87413

Phone #:

email or Fax#: khong@harvest-midstream.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:
☐ Standard ☒ Rush same day

Project Name:
Trunk L

Project #:

Project Manager:
Brooke Herb

Sampler: Josh Adams

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CF): 1.8°c ea 1.0, 1.0, 1.0°

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 1904537 | BTEX / MTBE'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, NO3, NO2, PO4, SO4 | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-9-19 | 1030 | Soil | BH-10 @ 35-37' | (1) 4oz meatkit | cool | 001 | X | X | | | | | X | | | |
| | 1035 | | BH-10 @ 40-42' | | | 002 | X | X | | | | | X | | | |
| | 1340 | | BH-11 @ 30-32' | | | 003 | X | X | | | | | X | | | |
| ↓ | 1345 | ↓ | BH-11 @ 40-42' | ↓ | ↓ | 004 | X | X | | | | | X | | | |

| Date | Time | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 4-9-19 | 1505 | | | | 4/9/19 | 1505 |
| 4/9/19 | 1840 | | | | 04/10/19 | 0810 |

Remarks: cc: bherb@ltenv.com
jadams@ltenv.com
ccarroll@ltenv.com

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**
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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request