

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Michelle Lujan Grisham  
Governor

Sarah Cottrell Propst  
Cabinet Secretary

Todd E. Leahy, JD, PhD  
Deputy Cabinet Secretary

Adrienne Sandoval  
Director, Oil Conservation Division



Sent by electronic mail

February 10, 2020

Bob Raup  
WPX Energy  
One Williams Center, 25<sup>th</sup> Floor  
Tulsa, Oklahoma 74142  
[bob.raup@wpxenergy.com](mailto:bob.raup@wpxenergy.com)

**RE: Review of Modified Assessment Report and Remediation Workplan Regarding a Release Occurring on January 21, 2020 Associated with the Ape Fee #1 Production Well (API #30-015-42101) Located in Unit L of Section 4, Township 23 South, Range 27 East NMPM, Eddy County, New Mexico (OCD Incident #NVV2003029246)**

Mr. Raup,

The Oil Conservation Division (OCD) has reviewed the modified *Assessment Report and Proposed Remediation Work Plan* dated February 3, 2020 prepared by LT Environmental, Inc. on behalf of WPX Energy regarding the release of production fluids from a flowline in response to the OCD's written requests of January 31, 2020. The OCD hereby approves the modified remediation plan contained within the document.

The OCD requests the additional assessment and any resulting remedial efforts be undertaken as soon as possible in coordination with the affected landowner(s). WPX must notify the OCD District office in Artesia at least 48 hours prior to beginning field activities and before obtaining closure samples. WPX must use the OCD incident number provided above in future communications about this matter. Please contact Jim Griswold directly at (505) 476-3465 or by email at [jim.griswold@state.nm.us](mailto:jim.griswold@state.nm.us) if you have any questions or need clarification on any issues.

Respectfully,

Adrienne Sandoval  
Director

CC.  
OCD Southern District  
Rebecca Roose - New Mexico Environment Department  
Srikanth Paladugu - New Mexico Department of Health  
Heidi Krapfl - New Mexico Department of Health

## Griswold, Jim, EMNRD

---

**From:** Raup, Bob <Bob.Raup@wpxenergy.com>  
**Sent:** Monday, February 3, 2020 3:48 PM  
**To:** Sandoval, Adrienne, EMNRD  
**Cc:** Paladugu, Srikanth, DOH; Krapfl, Heidi, DOH; Roose, Rebecca, NMENV; Bratcher, Mike, EMNRD; Ames, Eric, EMNRD; Griswold, Jim, EMNRD; Wade, Gabriel, EMNRD  
**Subject:** [EXT] RE: [EXTERNAL] WPX APE Fee 1 Wellsite - OCD Response 1-31-20  
**Attachments:** Proposed Remediation Plan Ape Fee #001\_02.03.2020.pdf

Ms. Sandoval,

Attached, please find the updated Proposed Remediation Plan for the Ape Fee #001 Pad which addresses the comments NMOCD provided in the January 31<sup>st</sup> emailed letter. The Naturally Occurring Radioactive Material (NORM) Survey can now be found as Attachment 3 and LT Environmental has updated Figure 2 to reflect their proposed sampling locations.

Again, please do not hesitate to contact me if you have any questions or comments. Once approved, WPX will coordinate LTE's future sampling efforts with NMOCD in order to witness the field sampling efforts.

Thank you,

**Robert W. Raup II**

**HSE Supervisor**

One Williams Center, 25<sup>th</sup> Floor | Tulsa, OK 74172

Phone: 539-573-7314 | Mobile: 701-310-5194



Follow Us:    

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**From:** Sandoval, Adrienne, EMNRD <Adrienne.Sandoval@state.nm.us>

**Sent:** Friday, January 31, 2020 6:01 PM

**To:** Raup, Bob <Bob.Raup@wpxenergy.com>

**Cc:** Paladugu, Srikanth, DOH <Srikanth.Paladugu@state.nm.us>; Krapfl, Heidi, DOH <Heidi.Krapfl@state.nm.us>; Roose, Rebecca, NMENV <Rebecca.Roose@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Ames, Eric, EMNRD <Eric.Ames@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Wade, Gabriel, EMNRD <Gabriel.Wade@state.nm.us>

**Subject:** [EXTERNAL] WPX APE Fee 1 Wellsite - OCD Response 1-31-20

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CAUTION: This email was sent from an EXTERNAL source. Use caution when clicking links or opening attachments.

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Mr. Raup-

Please see the attached response to the Assessment Report and Proposed Remediation Work Plan dated January 29, 2020.

Adrienne Sandoval  
Oil Conservation Division Director

1220 S. St. Francis Dr.  
Santa Fe, NM 87505  
505-476-3441  
[Adrienne.Sandoval@state.nm.us](mailto:Adrienne.Sandoval@state.nm.us)

February 3, 2020

Mr. Mike Bratcher  
New Mexico Oil Conservation Division  
811 South First Street  
Artesia, New Mexico 88210

**RE: Assessment Report and Proposed Remediation Work Plan  
WPX Energy Permian, Inc.  
Ape Fee #001  
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC. (WPX), presents the following Assessment Report and Proposed Remediation Work Plan detailing soil sampling and planned remedial actions at the Ape Fee #001 (Site) in Units H and L, Sections 4 and 5, Township 23 South, Range 27 East, in Eddy County, New Mexico (Figure 1). This workplan is in response to the New Mexico Oil Conservation Division (NMOCD) email notification dated January 24, 2020, requesting additional information regarding the release and providing a deadline for a remediation work plan of January 29, 2020, and a follow up email by NMOCD on January 31, 2020 requesting additional information due by February 3, 2020. The purpose of this remediation work plan is to address potential impacts to soil following an event that resulted in the release of produced water that affected the property of an adjacent landowner.

## **BACKGROUND**

On January 21, 2020 at approx. 2:30 A.M., a split approximately 0.5 inches in diameter developed in the flowline connected to the Ape Fee #001 wellhead, causing a release of natural gas and produced water. The produced water misted onto the adjacent property. The volumes of gas and produced water released are estimated to be below 25 barrels (bbls) and 500 thousand cubic feet (MCF). Approximately 0.5 bbls of free liquids were observed at the point of the damaged flowline; however, no additional free liquids were observed. WPX responded by stopping the source by shutting in the Ape Fee #001 well and containing released materials. Remediation was initiated by collecting free liquids, applying absorbent materials to the adjacent roadway, and excavating visually impacted soil. Approximately 25 cubic yards of impacted soil were excavated and transferred to The R360 landfill located in Hobbs, New Mexico. A light misting from the release was observed affecting a portion of the ground surface, structures, and livestock on the neighboring property. With the landowner's permission, WPX handwashed the livestock with water and soap and power washed a storage trailer to remove any potential production fluids.



WPX contacted the NMOCD via a phone call to District II office and followed up with an email to District II personnel to provide courtesy notification of the incident. WPX also reported the release to the NMOCD on an initial Release Notification and Corrective Action Form C-141 (Form C-141) on January 26, 2020, and has yet to receive an Incident ID Number (Attachment 1).

### **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

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). Depth to groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs) based on known aquifer properties and well log data from the nearest identified water well. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) water well 322003104120301, located approximately 558 feet southwest of the Site. Water well 322003104120301 has a reported depth to water of 63 feet bgs. The closest significant watercourse to the Site is a tributary to the Pecos River located approximately 5,328 feet east of the Site. The Site is less than 300 feet from any occupied residence, school, hospital, institution, church, or wetland. The Site is less than 1,000 feet to a freshwater well or spring and is not within an unstable area, 100-year floodplain, or overlying a subsurface mine. The Site is located in a medium-potential karst area.

Based on these criteria, 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); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

### **INITIAL ASSESSMENT**

On January 21, 2020, LTE personnel inspected the Site to evaluate the release extent. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. After receiving approval from the landowner, a 3 percent (%) solution of MicroBlaze mixed in water was applied to approximately 40,000 square feet of the property to the west the release point. Additionally, excavation activities were conducted by WPX on the east side of South Thomason Road.

On January 23, 2020, eight boreholes (BH01 through BH08) were advanced on the private property located west of South Thomason Road using a hand auger. Soil boring locations were selected and agreed upon by both WPX and the landowner. Soil samples were collected from each borehole location from the ground surface (0 to 0.25 feet bgs) and 0.5 feet bgs. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO),





TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

## **ANALYTICAL RESULTS**

Laboratory analytical results indicated that all soil samples were compliant with Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

## **PROPOSED CONTINUED ASSESSMENT AND REMEDIATION WORK PLAN**

Remediation has temporarily been suspended at the request of an NMOCD letter dated January 24, 2020. Free liquids have been collected, and visually impacted soil was removed and transported to an NMOCD-approved facility on the date of the incident. MicroBlaze, a non-toxic product designed to aid in the dispersal of any hydrocarbons, was applied with landowner consent to the affected area on January 21, 2020. Soil samples collected on January 23, 2020 from the adjacent landowner's property indicate compliance with Closure Criteria. In addition, and at the request of the landowner, a radiological field screening of naturally occurring radioactive material (NORM) was performed by a third-party contractor on January 23, 2020 and indicative of background radiological conditions for the area. The NORM survey results are included as Attachment 3.

WPX proposes to continue soil sampling activities to confirm the presence or absence of impacted soil in the release footprint and fully delineate any identified elevated concentrations of hydrocarbons or chloride. Surface soil samples will be collected from the release area to laterally delineate impacts. In areas where impacts are identified at the surface, boreholes will be advanced and soil samples will be collected to vertically delineate the identified impacts. Up to two soil samples will be collected from each borehole location. A geologist will inspect and categorize the soil from each borehole, field screening soil samples for volatile aromatic hydrocarbons using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples will be shipped at or below 4 °C under strict COC procedures to Xenco in Midland, Texas, for analysis of BTEX following USEPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-ORO following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. If no impacts are identified during these assessment activities, a Closure Request will be submitted to the NMOCD.

Following the delineation activities, excavation of identified impacts will be conducted should any samples contain concentrations of BTEX, TPH, or chloride exceeding Closure Criteria. Excavation activities will be directed by field screening soil samples for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. Following completion of excavation activities, 5-point composite confirmation soil samples will be collected from the floor and sidewalls of the excavation area. Each soil sample will represent at most 200





square feet. All soil samples will be collected, handled, and analyzed as previously described. All proposed soil sampling locations are depicted on Figure 2.

These activities will be scheduled and conducted immediately following approval of this remediation work plan, and a summary report requesting closure will be submitted the NMOCD following receipt of analytical results.

If you have any questions or comments, please do not hesitate to contact Mr. Chris McKisson at (970) 285-9985 or [cmckisson@ltenv.com](mailto:cmckisson@ltenv.com).

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Chris McKisson'.

Chris McKisson  
Project Environmental Scientist

A handwritten signature in black ink, appearing to read 'Ashley L. Ager'.

Ashley L. Ager, M.S., P.G.  
Senior Geologist

cc: Jim Raley, WPX

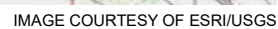
Robert Hamlet, NMOCD  
Victoria Venegas, NMOCD  
Jim Amos, BLM

Attachments:

Figure 1 Site Location Map  
Figure 2 Delineation Soil Sample Locations  
Table 1 Soil Analytical Results  
Attachment 1 Form C-141  
Attachment 2 Laboratory Analytical Reports  
Attachment 3 NORM Survey Results







SOUTH THOMASON ROAD

BH08@0-0.25'  
1/23/2020  
B: <0.00200  
BTEX: <0.00200  
TPH: <50.2  
Cl: 13.0

BH08A@0.5'  
1/23/2020  
B: <0.00200  
BTEX: <0.00200  
TPH: <50.0  
Cl: 157

BH07@0-0.25'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.2  
Cl: <9.94

BH07A@0.5'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.3  
Cl: 26.4

BH05@0-0.25'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.2  
Cl: 238

BH05A@0.5'  
1/23/2020  
B: <0.00202  
BTEX: <0.00202  
TPH: <50.2  
Cl: 52.9

BH02@0-0.25'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: 63.5  
Cl: 179

BH02A@0.5'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.2  
Cl: 49.3

BH06@0-0.25'  
1/23/2020  
B: <0.00202  
BTEX: <0.00202  
TPH: <49.9  
Cl: 381

BH06A@0.5'  
1/23/2020  
B: <0.00199  
BTEX: <0.00199  
TPH: <50.1  
Cl: 81.7

BH04@0-0.25'  
1/23/2020  
B: <0.00200  
BTEX: <0.00200  
TPH: <50.0  
Cl: 41.8

BH04A@0.5'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.1  
Cl: <10.1

BH01@0-0.25'  
1/23/2020  
B: <0.00202  
BTEX: <0.00202  
TPH: <49.8  
Cl: 16.7

BH01A@0.5'  
1/23/2020  
B: <0.00199  
BTEX: <0.00199  
TPH: <49.9  
Cl: 19.6

BH03@0-0.25'  
1/23/2020  
B: <0.00201  
BTEX: <0.00201  
TPH: <50.3  
Cl: 21.6

BH03A@0.5'  
1/23/2020  
B: <0.00198  
BTEX: <0.00198  
TPH: <49.9  
Cl: 11.5

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)  
SAMPLE DATE  
NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)  
B = 10 mg/kg  
BTEX = 50 mg/kg  
TPH = 100 mg/kg  
Cl = 600 mg/kg  
ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
<: INDICATES RESULT IS LESS THAN THE  
LABORATORY REPORTING LIMIT

## LEGEND



RELEASE LOCATION



SOIL SAMPLE



PROPOSED SOIL SAMPLING/BORING LOCATION



EXCAVATION EXTENT



RELEASE EXTENT (24,465 SQUARE FEET)



MICRO-BLAZE EMERGENCY LIQUID SPILL CONTROL



200 SQUARE-FOOT GRID

IMAGE COURTESY OF ESRI

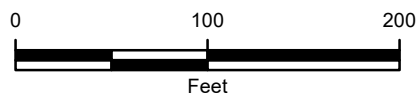


FIGURE 2  
DELINEATION SOIL SAMPLE LOCATIONS  
APE FEE #001  
UNIT H & L SEC 4 & 5 T23S R27E  
EDDY COUNTY, NEW MEXICO  
WPX ENERGY PERMIAN, LLC.





**TABLE 1  
SOIL ANALYTICAL RESULTS**

**APE FEE #001H  
EDDY COUNTY, NEW MEXICO  
WPX ENERGY PERMIAN, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | MRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|--------------|------------------|
| BH01                                  | 0 - 0.25                | 1/23/2020   | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.8       | <49.8       | <49.8       | <49.8        | 16.7             |
| BH01A                                 | 0.5                     | 1/23/2020   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9        | 19.6             |
| BH02                                  | 0 - 0.25                | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | 63.5        | <49.9       | 63.5         | 179              |
| BH02A                                 | 0.5                     | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.2       | <50.2       | <50.2       | <50.2        | 49.3             |
| BH03                                  | 0 - 0.25                | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.3       | <50.3       | <50.3       | <50.3        | 21.6             |
| BH03A                                 | 0.5                     | 1/23/2020   | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.9       | <49.9       | <49.9       | <49.9        | 11.5             |
| BH04                                  | 0 - 0.25                | 1/23/2020   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0        | 41.8             |
| BH04A                                 | 0.5                     | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.1       | <50.1       | <50.1       | <50.1        | <10.1            |
| BH05                                  | 0 - 0.25                | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.2       | <50.2       | <50.2       | <50.2        | 238              |
| BH05A                                 | 0.5                     | 1/23/2020   | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.2       | <50.2       | <50.2       | <50.2        | 52.9             |
| BH06                                  | 0 - 0.25                | 1/23/2020   | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.9       | <49.9       | <49.9       | <49.9        | 381              |
| BH06A                                 | 0.5                     | 1/23/2020   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.1       | <50.1       | <50.1       | <50.1        | 81.7             |
| BH07                                  | 0 - 0.25                | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.2       | <50.2       | <50.2       | <50.2        | <9.94            |
| BH07A                                 | 0.5                     | 1/23/2020   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.3       | <50.3       | <50.3       | <50.3        | 26.4             |
| BH08                                  | 0 - 0.25                | 1/23/2020   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.2       | <50.2       | <50.2       | <50.2        | 13.0             |
| BH08A                                 | 0.5                     | 1/23/2020   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0        | 157              |
| <b>NMOCD Table 1 Closure Criteria</b> |                         |             | <b>10</b>       | NE              | NE                    | NE                    | <b>50</b>          | NE          | NE          | NE          | <b>2,500</b> | <b>10,000</b>    |

**Notes:**

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

DRO - diesel range organics

GRO - gasoline range organics

MRO - motor oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below  
laboratory reporting limits

Bold- indicates result exceeds the applicable regulatory  
standard





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    |  |
| District RP    |  |
| Facility ID    |  |
| Application ID |  |

## Release Notification

### Responsible Party

|                                                                       |                                 |
|-----------------------------------------------------------------------|---------------------------------|
| Responsible Party: WPX Energy Permian, LLC.                           | OGRID: 246289                   |
| Contact Name: Robert Raup                                             | Contact Telephone: 701-310-5194 |
| Contact email: Bob.Raup@wpxenergy.com                                 | Incident # (assigned by OCD)    |
| Contact mailing address: One Williams Center – MD 25, Tulsa, OK 74172 |                                 |

### Location of Release Source

Latitude 32.333864 Longitude -104.203312  
(NAD 83 in decimal degrees to 5 decimal places)

|                                           |                                                      |
|-------------------------------------------|------------------------------------------------------|
| Site Name: Ape Fee #1                     | Site Type: Well Pad Facility Produced Water Flowline |
| Date Release Discovered: January 21, 2020 | API# (if applicable) 30-015-42101                    |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
|             | 4       | 23S      | 27E   | Eddy   |

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: George Carl A & Vira / Charles & Peggy Augustus)

### Nature and Volume of Release

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

|                                                    |                                                                                |                                                                                                      |
|----------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Crude Oil                 | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                                                              |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls)                                                         | Volume Recovered (bbls) To Be Determined                                                             |
|                                                    | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No To Be Determined                            |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                                                              |
| <input checked="" type="checkbox"/> Natural Gas    | Volume Released (Mcf)                                                          | Volume Recovered (Mcf) To Be Determined                                                              |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units): Impacted soil was recovered; volume/weight to be determined |

#### Cause of Release

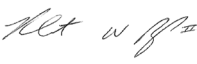
At approximately 2:30 a.m. on 1/21/2020, a hole approximately 1-inch in diameter developed in the flowline connected to the Ape Fee No. 1 well (API 30-015-42101), causing a misting of natural gas and produced water to occur. The estimated volume of gas and produced water released is still being determined; however, the total volumes released are estimated to be well below the 25 BBL. and 500 Mcf thresholds in 19.15.29.7.A NMAC.

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                         | If YES, for what reason(s) does the responsible party consider this a major release?<br><br> |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>YES, immediate notice was provided by WPX Energy Permian, LLC to NMOCD via phone call and email to the District 2 Field Office. A phone message was left for Mr. Mike Bratcher on January 21 <sup>st</sup> at approximately 10:15 AM. A follow up email was sent to Mike Bratcher, Victoria Venegas, and Robert Hamlet at 10:19 on January 21 <sup>st</sup> . |                                                                                              |

## Initial Response

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.                                                                                                                                                                                                                                                                                               |                                            |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br><br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                            |
| 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: <u>Robert W. Raup II</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Title: <u>HSE Supervisor</u>               |
| Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: <u>January 26<sup>th</sup>, 2019</u> |
| email: <u>Bob.Raup@wpxenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Telephone: <u>701-310-5194</u>             |
| <b><u>OCD Only</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                            |
| Received by: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date: _____                                |



# **Analytical Report 650125**

**for  
LT Environmental, Inc.**

**Project Manager: Chris McKisson**

**APE Fee #001H**

**24-JAN-20**

Collected By: Client



**1089 N Canal Street  
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



24-JAN-20

Project Manager: **Chris McKisson**  
**LT Environmental, Inc.**  
4600 W. 60th Avenue  
Arvada, CO 80003

Reference: XENCO Report No(s): **650125**  
**APE Fee #001H**  
Project Address:

**Chris McKisson:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650125. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650125 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| BH01      | S      | 01-23-20 12:50 | 0 - .25 ft   | 650125-001    |
| BH02      | S      | 01-23-20 12:55 | 0 - .25 ft   | 650125-002    |
| BH03      | S      | 01-23-20 13:05 | 0 - .25 ft   | 650125-003    |
| BH04      | S      | 01-23-20 13:10 | 0 - .25 ft   | 650125-004    |
| BH05      | S      | 01-23-20 13:15 | 0 - .25 ft   | 650125-005    |
| BH06      | S      | 01-23-20 13:20 | 0 - .25 ft   | 650125-006    |
| BH07      | S      | 01-23-20 13:25 | 0 - .25 ft   | 650125-007    |
| BH08      | S      | 01-23-20 13:30 | 0 - .25 ft   | 650125-008    |



## CASE NARRATIVE

**Client Name:** *LT Environmental, Inc.*

**Project Name:** *APE Fee #001H*

Project ID:  
Work Order Number(s): 650125

Report Date: 24-JAN-20  
Date Received: 01/23/2020

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3114284 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analysis Summary 650125

LT Environmental, Inc., Arvada, CO

Project Name: APE Fee #001H

Project Id:

Contact: Chris McKisson

Project Location:

Date Received in Lab: Thu Jan-23-20 11:45 am

Report Date: 24-JAN-20

Project Manager: Jessica Kramer

| Analysis Requested                 | Lab Id:    | 650125-001       | 650125-002       | 650125-003       | 650125-004       | 650125-005       | 650125-006       |
|------------------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | Field Id:  | BH01             | BH02             | BH03             | BH04             | BH05             | BH06             |
|                                    | Depth:     | 0-.25 ft         | 0-.25 ft         | 0-.25 ft         | 0-.25 ft         | 0-.25 ft         | 0-.25 ft         |
|                                    | Matrix:    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | Sampled:   | Jan-23-20 12:50  | Jan-23-20 12:55  | Jan-23-20 13:05  | Jan-23-20 13:10  | Jan-23-20 13:15  | Jan-23-20 13:20  |
| BTEX by EPA 8021B                  | Extracted: | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  |
|                                    | Analyzed:  | Jan-24-20 02:38  | Jan-24-20 02:18  | Jan-24-20 02:58  | Jan-24-20 03:19  | Jan-24-20 03:39  | Jan-24-20 03:59  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Toluene                            |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Ethylbenzene                       |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| m,p-Xylenes                        |            | <0.00403 0.00403 | <0.00402 0.00402 | <0.00402 0.00402 | <0.00400 0.00400 | <0.00402 0.00402 | <0.00403 0.00403 |
| o-Xylene                           |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Xylenes, Total                     |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Total BTEX                         |            | <0.00202 0.00202 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Chloride by EPA 300                | Extracted: | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  |
|                                    | Analyzed:  | Jan-23-20 21:32  | Jan-23-20 21:37  | Jan-23-20 21:43  | Jan-23-20 21:48  | Jan-23-20 21:54  | Jan-23-20 21:59  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |            | 16.7 10.0        | 179 10.1         | 21.6 10.0        | 41.8 10.0        | 238 19.8         | 381 20.0         |
| TPH by SW8015 Mod                  | Extracted: | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  |
|                                    | Analyzed:  | Jan-23-20 23:45  | Jan-23-20 23:45  | Jan-24-20 00:05  | Jan-24-20 00:05  | Jan-24-20 00:24  | Jan-24-20 00:44  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |            | <49.8 49.8       | <49.9 49.9       | <50.3 50.3       | <50.0 50.0       | <50.2 50.2       | <49.9 49.9       |
| Diesel Range Organics (DRO)        |            | <49.8 49.8       | 63.5 49.9        | <50.3 50.3       | <50.0 50.0       | <50.2 50.2       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO) |            | <49.8 49.8       | <49.9 49.9       | <50.3 50.3       | <50.0 50.0       | <50.2 50.2       | <49.9 49.9       |
| Total GRO-DRO                      |            | <49.8 49.8       | 63.5 49.9        | <50.3 50.3       | <50.0 50.0       | <50.2 50.2       | <49.9 49.9       |
| Total TPH                          |            | <49.8 49.8       | 63.5 49.9        | <50.3 50.3       | <50.0 50.0       | <50.2 50.2       | <49.9 49.9       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 650125

LT Environmental, Inc., Arvada, CO

Project Name: APE Fee #001H

Project Id:

Contact: Chris McKisson

Project Location:

Date Received in Lab: Thu Jan-23-20 11:45 am

Report Date: 24-JAN-20

Project Manager: Jessica Kramer

|                                    |                   |                  |                  |  |  |  |  |
|------------------------------------|-------------------|------------------|------------------|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 650125-007       | 650125-008       |  |  |  |  |
|                                    | <b>Field Id:</b>  | BH07             | BH08             |  |  |  |  |
|                                    | <b>Depth:</b>     | 0-.25 ft         | 0-.25 ft         |  |  |  |  |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             |  |  |  |  |
|                                    | <b>Sampled:</b>   | Jan-23-20 13:25  | Jan-23-20 13:30  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Jan-23-20 18:00  | Jan-23-20 18:00  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-24-20 04:20  | Jan-24-20 04:40  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Benzene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Toluene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00400 0.00400 |  |  |  |  |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Xylenes, Total                     |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| <b>Chloride by EPA 300</b>         | <b>Extracted:</b> | Jan-23-20 17:30  | Jan-23-20 17:30  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-23-20 22:05  | Jan-23-20 22:38  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Chloride                           |                   | <9.94 9.94       | 13.0 9.98        |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Jan-23-20 17:30  | Jan-23-20 17:30  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-24-20 00:44  | Jan-24-20 01:04  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.2 50.2       | <50.2 50.2       |  |  |  |  |
| Diesel Range Organics (DRO)        |                   | <50.2 50.2       | <50.2 50.2       |  |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.2 50.2       | <50.2 50.2       |  |  |  |  |
| Total GRO-DRO                      |                   | <50.2 50.2       | <50.2 50.2       |  |  |  |  |
| Total TPH                          |                   | <50.2 50.2       | <50.2 50.2       |  |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer  
Project Assistant



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH01**  
Lab Sample Id: 650125-001

Matrix: Soil  
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 16.7   | 10.0 | mg/kg | 01.23.20 21.32 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 01.23.20 23.45 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 01.23.20 23.45 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 01.23.20 23.45 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 01.23.20 23.45 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 01.23.20 23.45 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 105        | %     | 70-135 | 01.23.20 23.45 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 01.23.20 23.45 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH01**  
Lab Sample Id: 650125-001

Matrix: Soil  
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 01.24.20 02.38       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 92                | %            | 70-130        | 01.24.20 02.38       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 01.24.20 02.38       |             |     |



## Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH02**  
Lab Sample Id: 650125-002

Matrix: Soil  
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 179    | 10.1 | mg/kg | 01.23.20 21.37 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9       | 49.9 | mg/kg | 01.23.20 23.45 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>63.5</b> | 49.9 | mg/kg | 01.23.20 23.45 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9       | 49.9 | mg/kg | 01.23.20 23.45 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>63.5</b> | 49.9 | mg/kg | 01.23.20 23.45 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>63.5</b> | 49.9 | mg/kg | 01.23.20 23.45 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 106        | %     | 70-135 | 01.23.20 23.45 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 01.23.20 23.45 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH02**  
Lab Sample Id: 650125-002

Matrix: Soil  
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.18       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 110               | %            | 70-130        | 01.24.20 02.18       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 90                | %            | 70-130        | 01.24.20 02.18       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH03**  
Lab Sample Id: 650125-003

Matrix: Soil  
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 21.6   | 10.0 | mg/kg | 01.23.20 21.43 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.3  | 50.3 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.3  | 50.3 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Total TPH                          | PHC635     | <50.3  | 50.3 | mg/kg | 01.24.20 00.05 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 106        | %     | 70-135 | 01.24.20 00.05 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 01.24.20 00.05 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH03**  
Lab Sample Id: 650125-003

Matrix: Soil  
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.23.20 18.00

Basis: Wet Weight

Seq Number: 3114284

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 02.58       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 106               | %            | 70-130        | 01.24.20 02.58       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 90                | %            | 70-130        | 01.24.20 02.58       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH04**  
Lab Sample Id: 650125-004

Matrix: Soil  
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 41.8   | 10.0 | mg/kg | 01.23.20 21.48 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.24.20 00.05 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.24.20 00.05 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 107        | %     | 70-135 | 01.24.20 00.05 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 01.24.20 00.05 |      |



## Certificate of Analytical Results 650125

LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH04**  
Lab Sample Id: 650125-004

Matrix: Soil  
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.23.20 18.00

Basis: Wet Weight

Seq Number: 3114284

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.24.20 03.19       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 108               | %            | 70-130        | 01.24.20 03.19       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 01.24.20 03.19       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH05**  
Lab Sample Id: 650125-005

Matrix: Soil  
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 238    | 19.8 | mg/kg | 01.23.20 21.54 |      | 2   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.24.20 00.24 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.24.20 00.24 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.24.20 00.24 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.24.20 00.24 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.24.20 00.24 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 01.24.20 00.24 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 01.24.20 00.24 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH05**  
Lab Sample Id: 650125-005

Matrix: Soil  
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 03.39       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 01.24.20 03.39       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 93                | %            | 70-130        | 01.24.20 03.39       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH06**  
Lab Sample Id: 650125-006

Matrix: Soil  
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 381    | 20.0 | mg/kg | 01.23.20 21.59 |      | 2   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.24.20 00.44 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 01.24.20 00.44 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 01.24.20 00.44 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH06**  
Lab Sample Id: 650125-006

Matrix: Soil  
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 01.24.20 03.59       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 89                | %            | 70-130        | 01.24.20 03.59       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 01.24.20 03.59       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH07**  
Lab Sample Id: 650125-007

Matrix: Soil  
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114263

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <9.94  | 9.94 | mg/kg | 01.23.20 22.05 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.24.20 00.44 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.24.20 00.44 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 108        | %     | 70-135 | 01.24.20 00.44 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 01.24.20 00.44 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH07**  
Lab Sample Id: 650125-007

Matrix: Soil  
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.23.20 18.00

Basis: Wet Weight

Seq Number: 3114284

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 04.20       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 01.24.20 04.20       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 01.24.20 04.20       |             |     |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH08**  
Lab Sample Id: 650125-008

Matrix: Soil  
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114266

Date Prep: 01.23.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 13.0   | 9.98 | mg/kg | 01.23.20 22.38 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114260

Date Prep: 01.23.20 17.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.24.20 01.04 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.24.20 01.04 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.24.20 01.04 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.24.20 01.04 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.24.20 01.04 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 113        | %     | 70-135 | 01.24.20 01.04 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 01.24.20 01.04 |      |



## Certificate of Analytical Results 650125

### LT Environmental, Inc., Arvada, CO

APE Fee #001H

Sample Id: **BH08**  
Lab Sample Id: 650125-008

Matrix: Soil  
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 11.45  
Sample Depth: 0 - .25 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114284

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.24.20 04.40       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 89                | %            | 70-130        | 01.24.20 04.40       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 106               | %            | 70-130        | 01.24.20 04.40       |             |     |

## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



## QC Summary 650125

### LT Environmental, Inc.

APE Fee #001H

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114263

MB Sample Id: 7695075-1-BLK

Matrix: Solid

LCS Sample Id: 7695075-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695075-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 245        | 98       | 246         | 98        | 90-110 | 0    | 20        | mg/kg | 01.23.20 19:35 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114266

MB Sample Id: 7695076-1-BLK

Matrix: Solid

LCS Sample Id: 7695076-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695076-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 246        | 98       | 247         | 99        | 90-110 | 0    | 20        | mg/kg | 01.23.20 22:27 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114263

Parent Sample Id: 650111-008

Matrix: Soil

MS Sample Id: 650111-008 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650111-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 279           | 198          | 497       | 110     | 497        | 111      | 90-110 | 0    | 20        | mg/kg | 01.23.20 21:10 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114263

Parent Sample Id: 650121-004

Matrix: Soil

MS Sample Id: 650121-004 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650121-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 202           | 200          | 399       | 99      | 401        | 100      | 90-110 | 1    | 20        | mg/kg | 01.23.20 19:52 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114266

Parent Sample Id: 650114-010

Matrix: Soil

MS Sample Id: 650114-010 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650114-010 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 204           | 200          | 405       | 101     | 406        | 101      | 90-110 | 0    | 20        | mg/kg | 01.23.20 23:59 |      |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



# QC Summary 650125

## LT Environmental, Inc.

APE Fee #001H

### Analytical Method: Chloride by EPA 300

Seq Number: 3114266

Parent Sample Id: 650125-008

Matrix: Soil

MS Sample Id: 650125-008 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650125-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 13.0          | 200          | 211       | 99      | 212        | 100      | 90-110 | 0    | 20        | mg/kg | 01.23.20 22:44 |      |

### Analytical Method: TPH by SW8015 Mod

Seq Number: 3114260

MB Sample Id: 7695067-1-BLK

Matrix: Solid

LCS Sample Id: 7695067-1-BKS

Prep Method: SW8015P

Date Prep: 01.23.20

LCSD Sample Id: 7695067-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0     | 1000         | 1270       | 127      | 1210        | 121       | 70-135 | 5    | 35        | mg/kg | 01.23.20 22:06 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1270       | 127      | 1120        | 112       | 70-135 | 13   | 35        | mg/kg | 01.23.20 22:06 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 93      |         | 124      |          | 120       |           | 70-135 | %     | 01.23.20 22:06 |
| o-Terphenyl    | 98      |         | 117      |          | 100       |           | 70-135 | %     | 01.23.20 22:06 |

### Analytical Method: TPH by SW8015 Mod

Seq Number: 3114260

Matrix: Solid

MB Sample Id: 7695067-1-BLK

Prep Method: SW8015P

Date Prep: 01.23.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 01.23.20 22:06 |      |

### Analytical Method: TPH by SW8015 Mod

Seq Number: 3114260

Parent Sample Id: 650114-006

Matrix: Soil

MS Sample Id: 650114-006 S

Prep Method: SW8015P

Date Prep: 01.23.20

MSD Sample Id: 650114-006 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.2         | 1000         | 1210      | 121     | 1220       | 122      | 70-135 | 1    | 35        | mg/kg | 01.23.20 22:46 |      |
| Diesel Range Organics (DRO)       | <50.2         | 1000         | 1360      | 136     | 1260       | 126      | 70-135 | 8    | 35        | mg/kg | 01.23.20 22:46 | X    |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 130     |         | 133      |          | 70-135 | %     | 01.23.20 22:46 |
| o-Terphenyl    | 116     |         | 123      |          | 70-135 | %     | 01.23.20 22:46 |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



# QC Summary 650125

## LT Environmental, Inc.

APE Fee #001H

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114284

MB Sample Id: 7695071-1-BLK

Matrix: Solid

LCS Sample Id: 7695071-1-BKS

Prep Method: SW5030B

Date Prep: 01.23.20

LCSD Sample Id: 7695071-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00200  | 0.100        | 0.0883     | 88       | 0.0944      | 94        | 70-130 | 7    | 35        | mg/kg | 01.24.20 00:36 |      |
| Toluene      | <0.00200  | 0.100        | 0.0760     | 76       | 0.0865      | 87        | 70-130 | 13   | 35        | mg/kg | 01.24.20 00:36 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0868     | 87       | 0.0836      | 84        | 71-129 | 4    | 35        | mg/kg | 01.24.20 00:36 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.182      | 91       | 0.164       | 82        | 70-135 | 10   | 35        | mg/kg | 01.24.20 00:36 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0870     | 87       | 0.0835      | 84        | 71-133 | 4    | 35        | mg/kg | 01.24.20 00:36 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 106     |         | 105      |          | 105       |           | 70-130 | %     | 01.24.20 00:36 |
| 4-Bromofluorobenzene | 89      |         | 88       |          | 88        |           | 70-130 | %     | 01.24.20 00:36 |

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114284

Parent Sample Id: 650125-002

Matrix: Soil

MS Sample Id: 650125-002 S

Prep Method: SW5030B

Date Prep: 01.23.20

MSD Sample Id: 650125-002 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00201      | 0.101        | 0.0825    | 82      | 0.0875     | 87       | 70-130 | 6    | 35        | mg/kg | 01.24.20 01:16 |      |
| Toluene      | <0.00201      | 0.101        | 0.0805    | 80      | 0.0835     | 83       | 70-130 | 4    | 35        | mg/kg | 01.24.20 01:16 |      |
| Ethylbenzene | <0.00201      | 0.101        | 0.0855    | 85      | 0.0905     | 90       | 71-129 | 6    | 35        | mg/kg | 01.24.20 01:16 |      |
| m,p-Xylenes  | <0.00402      | 0.201        | 0.187     | 93      | 0.178      | 89       | 70-135 | 5    | 35        | mg/kg | 01.24.20 01:16 |      |
| o-Xylene     | <0.00201      | 0.101        | 0.0734    | 73      | 0.0755     | 75       | 71-133 | 3    | 35        | mg/kg | 01.24.20 01:16 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 107     |         | 107      |          | 70-130 | %     | 01.24.20 01:16 |
| 4-Bromofluorobenzene | 94      |         | 86       |          | 70-130 | %     | 01.24.20 01:16 |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



# Chain of Custody

Work Order No: 650125

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 1

|                  |                                        |                         |                                        |
|------------------|----------------------------------------|-------------------------|----------------------------------------|
| Project Manager: | Chris McKisson                         | Bill to: (if different) |                                        |
| Company Name:    | LT Environmental, Inc., Permian office | Company Name:           | Same                                   |
| Address:         | 820 Megan Ave Unit B                   | Address:                | 11                                     |
| City, State ZIP: | Rifle, CO 81650                        | City, State ZIP:        | 11                                     |
| Phone:           | 432.704.5178                           | Email:                  | ggreen@ltenv.com ; cmckisson@ltenv.com |

|                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>            |
| State of Project:                                                                                                                                                                                              |
| Reporting Level: <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> |
| Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                                      |

|                       |                                                                         |                                                                                 |                                                                              |                  |                  |
|-----------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------|------------------|
| Project Name:         | APE Fee #001H                                                           | Turn Around                                                                     |                                                                              | ANALYSIS REQUEST | Work Order Notes |
| Project Number:       |                                                                         | Routine <input type="checkbox"/>                                                |                                                                              |                  |                  |
| P.O. Number:          | 01/21/2020                                                              | Rush: 24hr                                                                      |                                                                              |                  |                  |
| Sampler's Name:       | Garrett Green                                                           | Due Date:                                                                       |                                                                              |                  |                  |
| <b>SAMPLE RECEIPT</b> |                                                                         | Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Wet Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                  |                  |
| Temperature (°C):     | 2.2                                                                     | Thermometer ID                                                                  |                                                                              |                  |                  |
| Received Intact:      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>     | Correction Factor:                                                              |                                                                              |                  |                  |
| Cooler Custody Seals: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Total Containers:                                                               |                                                                              |                  |                  |
| Sample Custody Seals: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |                                                                                 |                                                                              |                  |                  |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth    | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0-8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Sample Comments |
|-----------------------|--------|--------------|--------------|----------|----------------------|----------------|-------------------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------------|
| BH01                  | S      | 01/23/2020   | 12:56        | 0'-0.25' | 1                    | X              | X                 | X                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH02                  |        |              | 12:55        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH03                  |        |              | 13:05        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH04                  |        |              | 13:16        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH05                  |        |              | 13:15        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH06                  |        |              | 13:20        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH07                  |        |              | 13:25        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |
| BH08                  |        |              | 13:30        |          | 1                    |                |                   |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                 |

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |               |                              |                          |           |
|------------------------------|--------------------------|---------------|------------------------------|--------------------------|-----------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time     | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
| <u>[Signature]</u>           | <u>[Signature]</u>       | 1/23/20 15:45 |                              |                          |           |
|                              |                          |               |                              |                          |           |
|                              |                          |               |                              |                          |           |
|                              |                          |               |                              |                          |           |

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 01.23.2020 01.45.00 PM

**Work Order #:** 650125

**Acceptable Temperature Range:** 0 - 6 degC

**Air and Metal samples Acceptable Range:** Ambient

**Temperature Measuring device used :** T-NM-007

| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 2.2      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received on ice?                            | Yes      |
| #4 *Custody Seals intact on shipping container/ cooler? | Yes      |
| #5 Custody Seals intact on sample bottles?              | Yes      |
| #6 *Custody Seals Signed and dated?                     | Yes      |
| #7 *Chain of Custody present?                           | Yes      |
| #8 Any missing/extra samples?                           | No       |
| #9 Chain of Custody signed when relinquished/ received? | Yes      |
| #10 Chain of Custody agrees with sample labels/matrix?  | Yes      |
| #11 Container label(s) legible and intact?              | Yes      |
| #12 Samples in proper container/ bottle?                | Yes      |
| #13 Samples properly preserved?                         | Yes      |
| #14 Sample container(s) intact?                         | Yes      |
| #15 Sufficient sample amount for indicated test(s)?     | Yes      |
| #16 All samples received within hold time?              | Yes      |
| #17 Subcontract of sample(s)?                           | No       |
| #18 Water VOC samples have zero headspace?              | N/A      |

**\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

**Checklist completed by:**

  
Elizabeth McClellan

Date: 01.23.2020

**Checklist reviewed by:**

  
Jessica Kramer

Date: 01.24.2020

# **Analytical Report 650133**

**for  
LT Environmental, Inc.**

**Project Manager: Chris McKisson**

**Ape Fee #001H**

**27-JAN-20**

Collected By: Client



**1089 N Canal Street  
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



27-JAN-20

Project Manager: **Chris McKisson**  
**LT Environmental, Inc.**  
4600 W. 60th Avenue  
Arvada, CO 80003

Reference: XENCO Report No(s): **650133**  
**Ape Fee #001H**  
Project Address:

**Chris McKisson:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650133. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650133 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| BH01A     | S      | 01-23-20 12:50 | 0.5 ft       | 650133-001    |
| BH02A     | S      | 01-23-20 12:55 | 0.5 ft       | 650133-002    |
| BH03A     | S      | 01-23-20 13:05 | 0.5 ft       | 650133-003    |
| BH04A     | S      | 01-23-20 13:10 | 0.5 ft       | 650133-004    |
| BH05A     | S      | 01-23-20 13:15 | 0.5 ft       | 650133-005    |
| BH06A     | S      | 01-23-20 13:20 | 0.5 ft       | 650133-006    |
| BH07A     | S      | 01-23-20 13:25 | 0.5 ft       | 650133-007    |
| BH08A     | S      | 01-23-20 13:30 | 0.5 ft       | 650133-008    |



## CASE NARRATIVE

**Client Name:** *LT Environmental, Inc.*

**Project Name:** *Ape Fee #001H*

Project ID:  
Work Order Number(s): 650133

Report Date: 27-JAN-20  
Date Received: 01/23/2020

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### **Sample receipt non conformances and comments:**

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#### **Sample receipt non conformances and comments per sample:**

None

#### **Analytical non conformances and comments:**

Batch: LBA-3114285 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3114404 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analysis Summary 650133

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee #001H

Project Id:

Contact: Chris McKisson

Project Location:

Date Received in Lab: Thu Jan-23-20 03:45 pm

Report Date: 27-JAN-20

Project Manager: Jessica Kramer

| Analysis Requested                 | Lab Id:    | 650133-001       | 650133-002       | 650133-003       | 650133-004       | 650133-005       | 650133-006       |
|------------------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | Field Id:  | BH01A            | BH02A            | BH03A            | BH04A            | BH05A            | BH06A            |
|                                    | Depth:     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                    | Matrix:    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | Sampled:   | Jan-23-20 12:50  | Jan-23-20 12:55  | Jan-23-20 13:05  | Jan-23-20 13:10  | Jan-23-20 13:15  | Jan-23-20 13:20  |
| BTEX by EPA 8021B                  | Extracted: | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  | Jan-23-20 18:00  |
|                                    | Analyzed:  | Jan-24-20 07:51  | Jan-24-20 08:11  | Jan-24-20 08:32  | Jan-24-20 08:52  | Jan-24-20 09:12  | Jan-24-20 09:33  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| Toluene                            |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| Ethylbenzene                       |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| m,p-Xylenes                        |            | <0.00398 0.00398 | <0.00402 0.00402 | <0.00397 0.00397 | <0.00402 0.00402 | <0.00404 0.00404 | <0.00398 0.00398 |
| o-Xylene                           |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| Xylenes, Total                     |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| Total BTEX                         |            | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |
| Chloride by EPA 300                | Extracted: | Jan-23-20 20:28  | Jan-23-20 20:28  | Jan-23-20 20:28  | Jan-23-20 20:28  | Jan-23-20 20:28  | Jan-23-20 20:28  |
|                                    | Analyzed:  | Jan-24-20 10:00  | Jan-24-20 10:05  | Jan-24-20 10:10  | Jan-24-20 10:15  | Jan-24-20 10:20  | Jan-24-20 10:25  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |            | 19.6 9.96        | 49.3 9.98        | 11.5 10.0        | <10.1 10.1       | 52.9 9.96        | 81.7 9.98        |
| TPH by SW8015 Mod                  | Extracted: | Jan-24-20 10:27  | Jan-24-20 10:27  | Jan-24-20 10:27  | Jan-24-20 10:27  | Jan-24-20 10:27  | Jan-24-20 10:27  |
|                                    | Analyzed:  | Jan-24-20 14:46  | Jan-24-20 15:26  | Jan-24-20 15:26  | Jan-24-20 15:46  | Jan-24-20 15:46  | Jan-24-20 16:06  |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |            | <49.9 49.9       | <50.2 50.2       | <49.9 49.9       | <50.1 50.1       | <50.2 50.2       | <50.1 50.1       |
| Diesel Range Organics (DRO)        |            | <49.9 49.9       | <50.2 50.2       | <49.9 49.9       | <50.1 50.1       | <50.2 50.2       | <50.1 50.1       |
| Motor Oil Range Hydrocarbons (MRO) |            | <49.9 49.9       | <50.2 50.2       | <49.9 49.9       | <50.1 50.1       | <50.2 50.2       | <50.1 50.1       |
| Total GRO-DRO                      |            | <49.9 49.9       | <50.2 50.2       | <49.9 49.9       | <50.1 50.1       | <50.2 50.2       | <50.1 50.1       |
| Total TPH                          |            | <49.9 49.9       | <50.2 50.2       | <49.9 49.9       | <50.1 50.1       | <50.2 50.2       | <50.1 50.1       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 650133

LT Environmental, Inc., Arvada, CO

Project Name: Ape Fee #001H

Project Id:

Contact: Chris McKisson

Project Location:

Date Received in Lab: Thu Jan-23-20 03:45 pm

Report Date: 27-JAN-20

Project Manager: Jessica Kramer

|                                    |                   |                  |                  |  |  |  |  |
|------------------------------------|-------------------|------------------|------------------|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 650133-007       | 650133-008       |  |  |  |  |
|                                    | <b>Field Id:</b>  | BH07A            | BH08A            |  |  |  |  |
|                                    | <b>Depth:</b>     | 0.5- ft          | 0.5- ft          |  |  |  |  |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             |  |  |  |  |
|                                    | <b>Sampled:</b>   | Jan-23-20 13:25  | Jan-23-20 13:30  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Jan-24-20 07:14  | Jan-24-20 07:14  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-24-20 13:56  | Jan-24-20 14:16  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Benzene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Toluene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00401 0.00401 |  |  |  |  |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Xylenes, Total                     |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00200 0.00200 |  |  |  |  |
| <b>Chloride by EPA 300</b>         | <b>Extracted:</b> | Jan-23-20 20:28  | Jan-23-20 20:28  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-24-20 10:31  | Jan-24-20 10:36  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Chloride                           |                   | 26.4 9.98        | 157 9.92         |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Jan-24-20 10:27  | Jan-24-20 10:27  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jan-24-20 16:06  | Jan-24-20 16:26  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    |                   |                  |                  |  |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.3 50.3       | <50.0 50.0       |  |  |  |  |
| Diesel Range Organics (DRO)        |                   | <50.3 50.3       | <50.0 50.0       |  |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.3 50.3       | <50.0 50.0       |  |  |  |  |
| Total GRO-DRO                      |                   | <50.3 50.3       | <50.0 50.0       |  |  |  |  |
| Total TPH                          |                   | <50.3 50.3       | <50.0 50.0       |  |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

Jessica Kramer  
Project Assistant



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH01A**  
Lab Sample Id: 650133-001

Matrix: Soil  
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 19.6   | 9.96 | mg/kg | 01.24.20 10.00 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.24.20 14.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.24.20 14.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.24.20 14.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.24.20 14.46 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.24.20 14.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 103        | %     | 70-135 | 01.24.20 14.46 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 01.24.20 14.46 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH01A**  
Lab Sample Id: 650133-001

Matrix: Soil  
Date Collected: 01.23.20 12.50

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 01.24.20 07.51       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 01.24.20 07.51       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 01.24.20 07.51       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH02A**  
Lab Sample Id: 650133-002

Matrix: Soil  
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 49.3   | 9.98 | mg/kg | 01.24.20 10.05 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.24.20 15.26 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 01.24.20 15.26 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 01.24.20 15.26 |      |



## Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH02A**  
Lab Sample Id: 650133-002

Matrix: Soil  
Date Collected: 01.23.20 12.55

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.11       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 01.24.20 08.11       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 01.24.20 08.11       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH03A**  
Lab Sample Id: 650133-003

Matrix: Soil  
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 11.5   | 10.0 | mg/kg | 01.24.20 10.10 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.24.20 15.26 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.24.20 15.26 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 106        | %     | 70-135 | 01.24.20 15.26 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 01.24.20 15.26 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH03A**  
Lab Sample Id: 650133-003

Matrix: Soil  
Date Collected: 01.23.20 13.05

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 01.24.20 08.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 01.24.20 08.32       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 01.24.20 08.32       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH04A**  
Lab Sample Id: 650133-004

Matrix: Soil  
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <10.1  | 10.1 | mg/kg | 01.24.20 10.15 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.1  | 50.1 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.1  | 50.1 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.1  | 50.1 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.1  | 50.1 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Total TPH                          | PHC635     | <50.1  | 50.1 | mg/kg | 01.24.20 15.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 103        | %     | 70-135 | 01.24.20 15.46 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 01.24.20 15.46 |      |



## Certificate of Analytical Results 650133

LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH04A**  
Lab Sample Id: 650133-004

Matrix: Soil  
Date Collected: 01.23.20 13.10

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 08.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 01.24.20 08.52       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 96                | %            | 70-130        | 01.24.20 08.52       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH05A**  
Lab Sample Id: 650133-005

Matrix: Soil  
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 52.9   | 9.96 | mg/kg | 01.24.20 10.20 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.24.20 15.46 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.24.20 15.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 108        | %     | 70-135 | 01.24.20 15.46 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 01.24.20 15.46 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH05A**  
Lab Sample Id: 650133-005

Matrix: Soil  
Date Collected: 01.23.20 13.15

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 01.24.20 09.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 01.24.20 09.12       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 01.24.20 09.12       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH06A**  
Lab Sample Id: 650133-006

Matrix: Soil  
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 81.7   | 9.98 | mg/kg | 01.24.20 10.25 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.1  | 50.1 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.1  | 50.1 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.1  | 50.1 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.1  | 50.1 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Total TPH                          | PHC635     | <50.1  | 50.1 | mg/kg | 01.24.20 16.06 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 111        | %     | 70-135 | 01.24.20 16.06 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 01.24.20 16.06 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH06A**  
Lab Sample Id: 650133-006

Matrix: Soil  
Date Collected: 01.23.20 13.20

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114285

Date Prep: 01.23.20 18.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 01.24.20 09.33       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 01.24.20 09.33       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 01.24.20 09.33       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH07A**  
Lab Sample Id: 650133-007

Matrix: Soil  
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 26.4   | 9.98 | mg/kg | 01.24.20 10.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.3  | 50.3 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.3  | 50.3 | mg/kg | 01.24.20 16.06 | U    | 1   |
| Total TPH                          | PHC635     | <50.3  | 50.3 | mg/kg | 01.24.20 16.06 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 01.24.20 16.06 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 01.24.20 16.06 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH07A**  
Lab Sample Id: 650133-007

Matrix: Soil  
Date Collected: 01.23.20 13.25

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114404

Prep Method: SW5030B

% Moisture:

Date Prep: 01.24.20 07.14

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 01.24.20 13.56       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 92                | %            | 70-130        | 01.24.20 13.56       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 01.24.20 13.56       |             |     |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH08A**  
Lab Sample Id: 650133-008

Matrix: Soil  
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3114325

Date Prep: 01.23.20 20.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 157    | 9.92 | mg/kg | 01.24.20 10.36 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3114448

Date Prep: 01.24.20 10.27

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.24.20 16.26 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.24.20 16.26 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.24.20 16.26 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.24.20 16.26 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.24.20 16.26 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 105        | %     | 70-135 | 01.24.20 16.26 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 01.24.20 16.26 |      |



## Certificate of Analytical Results 650133

### LT Environmental, Inc., Arvada, CO

Ape Fee #001H

Sample Id: **BH08A**  
Lab Sample Id: 650133-008

Matrix: Soil  
Date Collected: 01.23.20 13.30

Date Received: 01.23.20 15.45  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3114404

Prep Method: SW5030B

% Moisture:

Date Prep: 01.24.20 07.14

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.24.20 14.16       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 106               | %            | 70-130        | 01.24.20 14.16       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 91                | %            | 70-130        | 01.24.20 14.16       |             |     |

## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

**+** NELAC certification not offered for this compound.

**\*** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



## QC Summary 650133

### LT Environmental, Inc.

Ape Fee #001H

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114325

MB Sample Id: 7695077-1-BLK

Matrix: Solid

LCS Sample Id: 7695077-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695077-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 247        | 99       | 246         | 98        | 90-110 | 0    | 20        | mg/kg | 01.24.20 08:08 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114325

Parent Sample Id: 650130-001

Matrix: Soil

MS Sample Id: 650130-001 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650130-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 3190          | 201          | 3380      | 95      | 3400       | 104      | 90-110 | 1    | 20        | mg/kg | 01.24.20 08:29 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3114448

MB Sample Id: 7695115-1-BLK

Matrix: Solid

LCS Sample Id: 7695115-1-BKS

Prep Method: SW8015P

Date Prep: 01.24.20

LCSD Sample Id: 7695115-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD  | RPD Limit      | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|-------|----------------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0     | 1000         | 1140       | 114      | 821         | 82        | 70-135 | 33    | 35             | mg/kg | 01.24.20 14:26 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1100       | 110      | 912         | 91        | 70-135 | 19    | 35             | mg/kg | 01.24.20 14:26 |      |
| Surrogate                         | MB %Rec   | MB Flag      | LCS %Rec   | LCS Flag | LCSD %Rec   | LCSD Flag | Limits | Units | Analysis Date  | Flag  |                |      |
| 1-Chlorooctane                    | 92        |              | 116        |          | 85          |           | 70-135 | %     | 01.24.20 14:26 |       |                |      |
| o-Terphenyl                       | 87        |              | 106        |          | 76          |           | 70-135 | %     | 01.24.20 14:26 |       |                |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3114448

Matrix: Solid

MB Sample Id: 7695115-1-BLK

Prep Method: SW8015P

Date Prep: 01.24.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 01.24.20 14:26 |      |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



# QC Summary 650133

## LT Environmental, Inc.

Ape Fee #001H

### Analytical Method: TPH by SW8015 Mod

Seq Number: 3114448

Parent Sample Id: 650133-001

Matrix: Soil

MS Sample Id: 650133-001 S

Prep Method: SW8015P

Date Prep: 01.24.20

MSD Sample Id: 650133-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.2         | 1000         | 1030      | 103     | 1080       | 108      | 70-135 | 5    | 35        | mg/kg | 01.24.20 15:06 |      |
| Diesel Range Organics (DRO)       | <50.2         | 1000         | 997       | 100     | 1070       | 107      | 70-135 | 7    | 35        | mg/kg | 01.24.20 15:06 |      |

### Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 120     |         | 126      |          | 70-135 | %     | 01.24.20 15:06 |
| o-Terphenyl    | 109     |         | 114      |          | 70-135 | %     | 01.24.20 15:06 |

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114285

MB Sample Id: 7695072-1-BLK

Matrix: Solid

LCS Sample Id: 7695072-1-BKS

Prep Method: SW5030B

Date Prep: 01.23.20

LCSD Sample Id: 7695072-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00200  | 0.100        | 0.0983     | 98       | 0.0965      | 97        | 70-130 | 2    | 35        | mg/kg | 01.24.20 00:28 |      |
| Toluene      | <0.00200  | 0.100        | 0.0949     | 95       | 0.0932      | 93        | 70-130 | 2    | 35        | mg/kg | 01.24.20 00:28 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0917     | 92       | 0.0900      | 90        | 71-129 | 2    | 35        | mg/kg | 01.24.20 00:28 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.188      | 94       | 0.185       | 93        | 70-135 | 2    | 35        | mg/kg | 01.24.20 00:28 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0940     | 94       | 0.0927      | 93        | 71-133 | 1    | 35        | mg/kg | 01.24.20 00:28 |      |

### Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 100     |         | 102      |          | 102       |           | 70-130 | %     | 01.24.20 00:28 |
| 4-Bromofluorobenzene | 95      |         | 94       |          | 98        |           | 70-130 | %     | 01.24.20 00:28 |

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114404

MB Sample Id: 7695073-1-BLK

Matrix: Solid

LCS Sample Id: 7695073-1-BKS

Prep Method: SW5030B

Date Prep: 01.24.20

LCSD Sample Id: 7695073-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00200  | 0.100        | 0.114      | 114      | 0.113       | 113       | 70-130 | 1    | 35        | mg/kg | 01.24.20 11:13 |      |
| Toluene      | <0.00200  | 0.100        | 0.104      | 104      | 0.103       | 103       | 70-130 | 1    | 35        | mg/kg | 01.24.20 11:13 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.100      | 100      | 0.0985      | 99        | 71-129 | 2    | 35        | mg/kg | 01.24.20 11:13 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.196      | 98       | 0.193       | 97        | 70-135 | 2    | 35        | mg/kg | 01.24.20 11:13 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.100      | 100      | 0.0984      | 98        | 71-133 | 2    | 35        | mg/kg | 01.24.20 11:13 |      |

### Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 107     |         | 108      |          | 108       |           | 70-130 | %     | 01.24.20 11:13 |
| 4-Bromofluorobenzene | 90      |         | 93       |          | 93        |           | 70-130 | %     | 01.24.20 11:13 |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



# QC Summary 650133

## LT Environmental, Inc.

Ape Fee #001H

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114285

Parent Sample Id: 650114-001

Matrix: Soil

MS Sample Id: 650114-001 S

Prep Method: SW5030B

Date Prep: 01.23.20

MSD Sample Id: 650114-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00200      | 0.100        | 0.0851    | 85      | 0.0881     | 89       | 70-130 | 3    | 35        | mg/kg | 01.24.20 01:09 |      |
| Toluene      | <0.00200      | 0.100        | 0.0817    | 82      | 0.0848     | 85       | 70-130 | 4    | 35        | mg/kg | 01.24.20 01:09 |      |
| Ethylbenzene | <0.00200      | 0.100        | 0.0780    | 78      | 0.0812     | 82       | 71-129 | 4    | 35        | mg/kg | 01.24.20 01:09 |      |
| m,p-Xylenes  | <0.00401      | 0.200        | 0.161     | 81      | 0.168      | 84       | 70-135 | 4    | 35        | mg/kg | 01.24.20 01:09 |      |
| o-Xylene     | <0.00200      | 0.100        | 0.0794    | 79      | 0.0828     | 83       | 71-133 | 4    | 35        | mg/kg | 01.24.20 01:09 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 102     |         | 103      |          | 70-130 | %     | 01.24.20 01:09 |
| 4-Bromofluorobenzene | 95      |         | 96       |          | 70-130 | %     | 01.24.20 01:09 |

### Analytical Method: BTEX by EPA 8021B

Seq Number: 3114404

Parent Sample Id: 650047-001

Matrix: Soil

MS Sample Id: 650047-001 S

Prep Method: SW5030B

Date Prep: 01.24.20

MSD Sample Id: 650047-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00200      | 0.100        | 0.121     | 121     | 0.118      | 118      | 70-130 | 3    | 35        | mg/kg | 01.24.20 11:54 |      |
| Toluene      | <0.00200      | 0.100        | 0.108     | 108     | 0.0999     | 100      | 70-130 | 8    | 35        | mg/kg | 01.24.20 11:54 |      |
| Ethylbenzene | <0.00200      | 0.100        | 0.103     | 103     | 0.0877     | 88       | 71-129 | 16   | 35        | mg/kg | 01.24.20 11:54 |      |
| m,p-Xylenes  | <0.00401      | 0.200        | 0.200     | 100     | 0.167      | 84       | 70-135 | 18   | 35        | mg/kg | 01.24.20 11:54 |      |
| o-Xylene     | <0.00200      | 0.100        | 0.102     | 102     | 0.0880     | 88       | 71-133 | 15   | 35        | mg/kg | 01.24.20 11:54 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 107     |         | 108      |          | 70-130 | %     | 01.24.20 11:54 |
| 4-Bromofluorobenzene | 93      |         | 99       |          | 70-130 | %     | 01.24.20 11:54 |

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample  
A = Parent Result  
C = MS/LCS Result  
E = MSD/LCSD Result

MS = Matrix Spike  
B = Spike Added  
D = MSD/LCSD % Rec



Work Order No: 1050133

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 704-4200

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 2 of 2

| Work Order Comments                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>Program:</b> UST/PST <input type="checkbox"/> PRR <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>                          |  |  |  |  |  |  |  |  |  |
| <b>State of Project:</b>                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |
| <b>Reporting Level:</b> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> |  |  |  |  |  |  |  |  |  |
| <b>Deliverables:</b> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                                                    |  |  |  |  |  |  |  |  |  |

| SAMPLE RECEIPT        |                                      |                          |                            |    |          |     |    |
|-----------------------|--------------------------------------|--------------------------|----------------------------|----|----------|-----|----|
| Temperature (°C):     |                                      | Temp Blank:              | Yes                        | No | Wet Ice: | Yes | No |
| Received Intact:      | <input checked="" type="radio"/> Yes | <input type="radio"/> No | Thermometer ID<br>T-NU-007 |    |          |     |    |
| Cooler Custody Seals: | <input checked="" type="radio"/> Yes | <input type="radio"/> No | Correction Factor:         |    |          |     |    |
| Sample Custody Seals: | <input checked="" type="radio"/> Yes | <input type="radio"/> No | Total Containers:          |    |          |     |    |

of Containers

(8015)

A 0=8021)

(EPA 300.0)

TAT starts the day received by the

[illegible]

| Total 200.7 / 6010                                                                                       |       | 200.8 / 6020: |                                                                                   |
|----------------------------------------------------------------------------------------------------------|-------|---------------|-----------------------------------------------------------------------------------|
| 8RCRA                                                                                                    | 13PPM | Texas 11      | Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn |
| TCL P / SPI P 6010: 8RCRA Sh As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn |       |               |                                                                                   |

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

| Relinquished by: (Signature) |  | Received by: (Signature) |  | Date/Time |  |
|------------------------------|--|--------------------------|--|-----------|--|
| 1                            |  |                          |  |           |  |
| 2                            |  |                          |  |           |  |
| 3                            |  |                          |  |           |  |
| 4                            |  |                          |  |           |  |
| 5                            |  |                          |  |           |  |
| 6                            |  |                          |  |           |  |

Revised Date 05/11/18 Bow 2018

**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 01.23.2020 03.45.00 PM

**Work Order #:** 650133

**Acceptable Temperature Range:** 0 - 6 degC

**Air and Metal samples Acceptable Range:** Ambient

**Temperature Measuring device used :** T-NM-007

| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 2.2      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received on ice?                            | Yes      |
| #4 *Custody Seals intact on shipping container/ cooler? | Yes      |
| #5 Custody Seals intact on sample bottles?              | Yes      |
| #6 *Custody Seals Signed and dated?                     | Yes      |
| #7 *Chain of Custody present?                           | Yes      |
| #8 Any missing/extra samples?                           | No       |
| #9 Chain of Custody signed when relinquished/ received? | Yes      |
| #10 Chain of Custody agrees with sample labels/matrix?  | Yes      |
| #11 Container label(s) legible and intact?              | Yes      |
| #12 Samples in proper container/ bottle?                | Yes      |
| #13 Samples properly preserved?                         | Yes      |
| #14 Sample container(s) intact?                         | Yes      |
| #15 Sufficient sample amount for indicated test(s)?     | Yes      |
| #16 All samples received within hold time?              | Yes      |
| #17 Subcontract of sample(s)?                           | No       |
| #18 Water VOC samples have zero headspace?              | N/A      |

**\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

**Checklist completed by:**

  
Elizabeth McClellan

Date: 01.23.2020

**Checklist reviewed by:**

  
Jessica Kramer

Date: 01.24.2020



# S Brothers Waste

## NORM Survey details.

Company : WPX Energy

Date 1-23-2020 Time 12:00 Location: 32.334246, -104.203915(Otis, NM)

Instrument Model 3500

Note: \*ND-denotes Non-detectable above background cpm of . Underlined numbers denote general area dose rates taken at waist level, O - denotes disc smear, \* - denotes LAS.

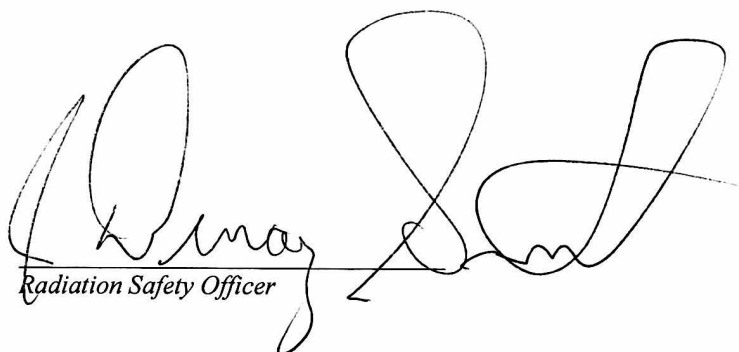
All dose rates in  $\mu\text{R/hr}$  unless otherwise noted. "LAS" denotes Large Area Smear.

On 1-23-2020, I was called to perform a NORM survey on a residence occupied by Mr. and Mrs. Carl George. NOTES were that a pipeline rupture had resulted in spray of produced water over the residence and property.

I arrived at approximately 12:00 and met Mrs. George and explained my reason for the visit. I then took background reading at the neighboring property as well as across the street. While performing my task, I took time to explain NORM and what levels would be considered elevated as well as the origin of NORM and the regulation of such.

I did not encounter any level of NORM or elevated reading of NORM at any location on the property or residence thereof. Below is a listing of readings

|                          |                       |
|--------------------------|-----------------------|
| Background               | 9-11 $\mu\text{R/hr}$ |
| Front drive              | 9-12 $\mu\text{R/hr}$ |
| Pens                     | 9-12 $\mu\text{R/hr}$ |
| Trees, structure in pens | 9-12 $\mu\text{R/hr}$ |
| Back Pen                 | 9-12 $\mu\text{R/hr}$ |
| Metal in back pen        | 9-12 $\mu\text{R/hr}$ |
| Boat                     | 9-12 $\mu\text{R/hr}$ |
| Between residence        | 9-12 $\mu\text{R/hr}$ |
| Road beside residence    | 9-12 $\mu\text{R/hr}$ |
| All structure in yard    | 9-12 $\mu\text{R/hr}$ |
| Along fence line         | 9-12 $\mu\text{R/hr}$ |



Radiation Safety Officer