LT Environmental, Inc.
3300 North "A" Street, Building 1, Unit 103
Midland, Texas 79705
432.704.5178

October 22, 2018

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

**RE: Closure Request**
**Bid Eddy Unit 122 Well**
**Remediation Permit Number 2RP-1623**
**Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the following letter report detailing excavation of impacted soil and confirmation soil sampling activities at the Big Eddy Unit 122 well (Site) in Unit F, Section 4, Township 20 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impact to soil after an open valve was discovered on the produced water tank. Approximately 25 barrels (bbls) of produced water were released onto the surface of the well pad, impacting an approximate area of 2,700 square feet. The release was discovered on April 12, 2013. The valve on the produced water tank was closed, and no released fluids were recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on April 16, 2013, and was assigned Remediation Permit (RP) Number 2RP-1623 (Attachment 1). Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based on the excavation activities and results of the confirmation soil sampling events, XTO is requesting no further action for this release.

## BACKGROUND

The final remediation occurred after August 14, 2018; therefore, LTE ranked the Site according to Table 1, the *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 greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well that has depth to water information is CP 00722, located approximately 1.05 miles north of the Site, with a depth to groundwater of 140 feet bgs and a total depth of 220 feet bgs. The water well is approximately 15 feet higher in elevation than the Site. The closest surface water to the Site is an unnamed arroyo located approximately 1.02 miles west of the Site. The Site is greater than

200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater 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. 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); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

## SOIL SAMPLING

On February 27, 2018, an LTE scientist collected five initial soil samples (SS01 through SS05) from a depth of 1-foot bgs to assess the lateral extent of any potential remaining soil impacts. The soil sample locations, depicted on Figure 2, were based on information provided in the initial Form C-141 and field observations. The soil samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993. No elevated field screening readings were detected, and no soil staining was observed. The soil samples were collected and placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for soil sample SS01 indicated a TPH-GRO/DRO concentration of 1,909.4 mg/kg, exceeding the NMOCD Table 1 closure criteria of 1,000 mg/kg. Laboratory analytical results for soil sample SS04 indicated a chloride concentration of 20,400 mg/kg, exceeding the NMOCD Table 1 closure criteria of 20,000 mg/kg. Laboratory analytical results for soil samples SS02, SS03, and SS05 indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2. Based on the soil sample laboratory analytical results, excavation of impacted soil was required.

## EXCAVATION ACTIVITIES

During September 2018, LTE personnel returned to the Site to oversee the excavation of impacted soil as indicated by laboratory analytical results exceeding the NMOCD Table 1 closure criteria for TPH-GRO/DRO and chloride in initial soil samples SS01 and SS04, respectively. Excavation activities commenced on September 26, 2018, and concluded on September 27, 2018. To delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated

from the release area to depths ranging from 1-foot bgs in the southern portion of the excavation to 8-feet bgs in the northern portion of the excavation. Following removal of impacted soil, LTE collected composite soil samples every 200 square feet from the sidewalls and floor of the excavation. Composite soil samples SW01 through SW09 were collected from the sidewalls of the excavation from depths of 1 foot to 7 feet bgs, and composite soil samples FS01 through FS08 were collected from the floor of the excavation from depths of 2 feet to 8 feet bgs. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas.

The excavation measured approximately 1,600 square feet in area with a depth ranging from 1 foot to 8 feet bgs. The horizontal extent of the excavation is illustrated on Figure 2. Approximately 5,000 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Landfill Facility, in Hobbs, New Mexico.

## ANALYTICAL RESULTS

Laboratory analytical results indicated that all final confirmation soil samples were compliant with the NMOCD Table 1 closure criteria for BTEX, TPH, and chloride. Laboratory analytical results indicated initial soil samples SS01 and SS04 exceeded the NMOCD Table 1 closure criteria for TPH-GRO/DRO and chloride, respectively. The impacted soil was excavated, and laboratory analytical results for the subsequent soil samples indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

## CONCLUSIONS

The impacted soil was excavated from the release area and laboratory analytical results for the confirmation soil samples collected from the final excavation extent indicate that BTEX, TPH, and chloride concentrations are compliant with the NMOCD Table 1 closure criteria. Natural degradation and excavation of impacted soil have successfully mitigated impacts at the Site. XTO requests no further action for this release. Upon approval of the no further action request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 3.

If you have any questions or comments, please do not hesitate to contact Ms. Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Maria Pruett, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM

Attachments:

| | |
|---|---|
| Figure 1 | Site Location Map |
| Figure 2 | Soil Sample Locations |
| Table 1 | Soil Analytical Results |
| Attachment 1 | Initial/Final NMOCD Form C-141 |
| Attachment 2 | Laboratory Analytical Reports |
| Attachment 3 | Photographic Log |

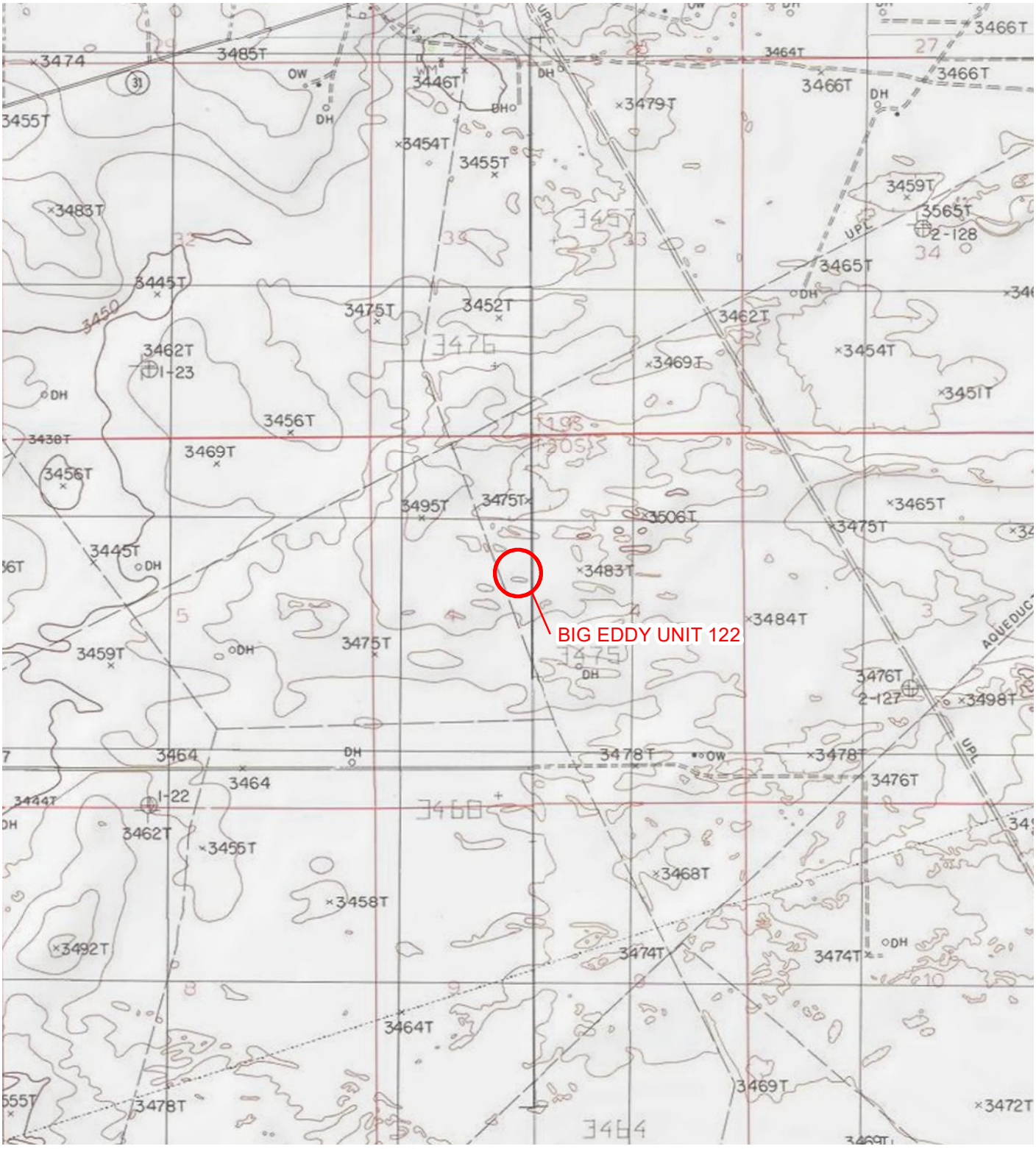


IMAGE COURTESY OF ESRI/USGS

**LEGEND**

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-1623

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT 122
UNIT F SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

P:\XTO Energy\GIS\MXD\012918071_BEU-122\012918071_FIG01_SL_2018.mxd

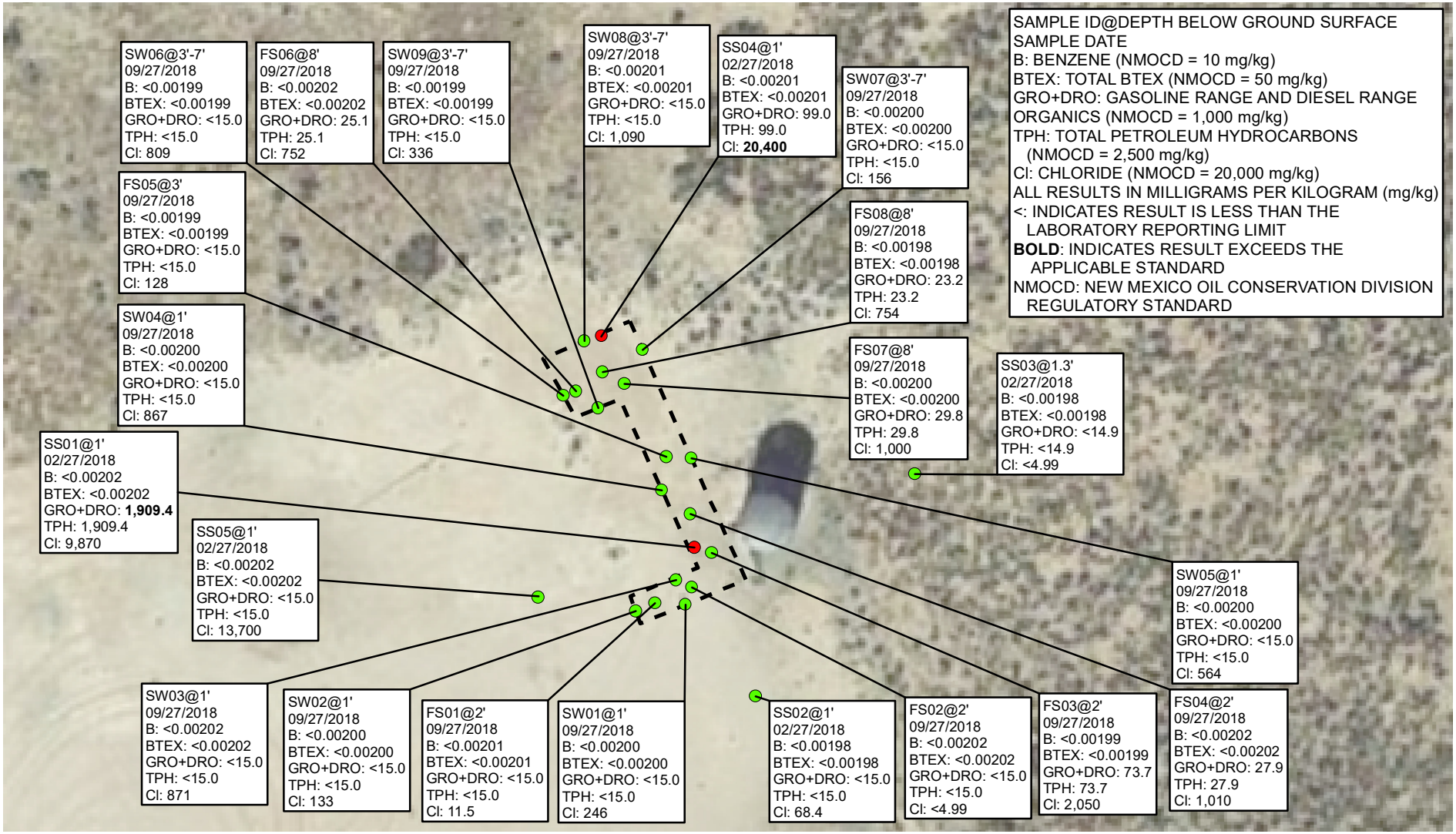


IMAGE COURTESY OF GOOGLE EARTH 2017

**LEGEND**

- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE
- EXCAVATION EXTENT

0 40 80
Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-1623

FIGURE 2
SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 122
UNIT F SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

P:\XTO Energy\GIS\MXD\012918071_BEU-122\012918071_FIG02_SITE_2018_1623.mxd

**TABLE 1**
**SOIL ANALYTICAL RESULTS**
**BIG EDDY UNIT 122**
**REMEDIATION PERMIT NUMBER 2RP-1623**
**EDDY COUNTY, NEW MEXICO**
**XTO ENERGY, INC.**

| Sample Name | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | Gasoline Range Organics (mg/kg) | C10-C28 Diesel Range Organics (mg/kg) | C28-40 Motor Oil Range (mg/kg) | GRO and DRO (mg/kg) | TPH (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS01 | 1.0 | 02/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <14.9 | 1,830 | 79.4 | **1,909.4** | 1,909.4 | 9,870 |
| SS02 | 1.0 | 02/27/2018 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 68.4 |
| SS03 | 1.0 | 02/27/2018 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <14.9 | <14.9 | <14.9 | <14.9 | <14.9 | <4.99 |
| SS04 | 1.0 | 02/27/2018 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <15.0 | 99.0 | <15.0 | 99.0 | 99.0 | **20,400** |
| SS05 | 1.0 | 02/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 13,700 |
| FS01 | 2.0 | 09/27/2018 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 12 |
| FS02 | 2.0 | 09/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | <4.99 |
| FS03 | 2.0 | 09/27/2018 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | 73.7 | <15.0 | 73.7 | 73.7 | 2,050 |
| FS04 | 2.0 | 09/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <14.9 | 27.9 | <14.9 | 27.9 | 27.9 | 1,010 |
| FS05 | 3.0 | 09/27/2018 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 128 |
| FS06 | 8.0 | 09/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <14.9 | 25.1 | <14.9 | 25.1 | 25.1 | 752 |
| FS07 | 8.0 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | 29.8 | <15.0 | 29.8 | 29.8 | 1,000 |
| FS08 | 8.0 | 09/27/2018 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <15.0 | 23.2 | <15.0 | 23.2 | 23.2 | 754 |
| SW01 | 1.0 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 246 |
| SW02 | 1.0 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 133 |
| SW03 | 1.0 | 09/27/2018 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <0.00202 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 871 |
| SW04 | 1.0 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 867 |
| SW05 | 1.0 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 564 |
| SW06 | 3 - 7 | 09/27/2018 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 809 |
| SW07 | 3 - 7 | 09/27/2018 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 156 |
| SW08 | 3 - 7 | 09/27/2018 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 1,090 |
| SW09 | 3 - 7 | 09/27/2018 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 336 |
| NMOCD Table 1 Limit | | | 10 | NE | NE | NE | 50 | NE | NE | NE | 1,000 | 2,500 | 20,000 |

**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
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

RECEIVED
APR 16 2013
NMOCD ARTESIA

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

# Release Notification and Corrective Action

nJM1310752365

## OPERATOR

☒ Initial Report ☐ Final Report

| | |
|---|---|
| Name of Company: BOPCO, L.P. 260737 | Contact: Tony Savoie |
| Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 | Telephone No. 575-887-7329 |
| Facility Name: Big Eddy Unit 122 | Facility Type: Exploration and Production |

| | | |
|---|---|---|
| Surface Owner: Federal | Mineral Owner: Federal | API No. 30-015-27454 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| F | 4 | 20S | 31E | 1980 | North | 1980 | West | Eddy |

**Latitude** N 32.604160 **Longitude** W 103.876110

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Produced water | Volume of Release 25 bbls | Volume Recovered: None |
| Source of Release | Date and Hour of Occurrence 4/12/13 Time unknown | Date and Hour of Discovery 4/12/13 1:00 p.m. |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Emergency NMOCD number #104 | |
| By Whom? Tony Savoie | Date and Hour 4/12/13 1:58 p.m. | |
| Was a Watercourse Reached? ☐ Yes ☐ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A valve was found open on the produced water tank on the location, the well is not on production. The cause of the release is under investigation. The tank valve was shut.

Describe Area Affected and Cleanup Action Taken.* Approximately 2700 sq. ft. of the caliche well pad was affected by the release. No remediation has taken place at this time. The spill will be cleaned up in accordance to the NMOCD and BLM guidelines on spill remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 4/16/13 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: By Mike Bratcher

Approval Date: APR 17 2013 Expiration Date:

Conditions of Approval: Remediation per OCD Rule & Guidelines. **SUBMIT REMEDIATION PROPOSAL NO LATER THAN:** May 17, 2013

Attached ☐

2RP-1623

* Attach Additional Sheets If Necessary

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 | 2RP-1623 |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party XTO Energy, Inc | OGRID 5380 |
| Contact Name Kyle Littrell | Contact Telephone 432-221-7331 |
| Contact email Kyle_Littrell@xtoenergy.com | Incident # 2RP-1623 |
| Contact mailing address 522 W. Mermod Suite 704 Carlsbad, NM 88220 | |

## Location of Release Source

Latitude 32.604160 Longitude -103.876110
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name Big Eddy Unit 122 | Site Type Exploration and Production |
| Date Release Discovered 4/12/2013 | API# *(if applicable)* 30-015-27454 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| F | 4 | 20S | 31E | Eddy |

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

## Nature and Volume of Release

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

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Produced Water | Volume Released (bbls) 25 bbls | Volume Recovered (bbls) 0 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

A valve was found open on the produced water tank. The well was not in production.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | 2RP-1623 |
| Facility ID | |
| Application ID | |

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

## Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/23/2018

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

**OCD Only**

Received by: Date:

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | nJMW1310752365 |
| District RP | 2RP-1623 |
| Facility ID | |
| Application ID | |

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Kyle Littrell Date: 10/23/2018

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

**OCD Only**

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Bradford Billings Date: 03/18/2020

Printed Name: Bradford Billings Title: E.SPEC.A

Site RP/incident is closed, but significant work relative to secton .13 (Restoration) of PArt 29 will need to be done on pad at P&A/shut down of facility/well.

# ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

# Analytical Report 577914

## for

## LT Environmental, Inc.

**Project Manager: Adrian Baker**

**BEU-122/ 2Rp-1623**

**09-MAR-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

09-MAR-18

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

Reference: XENCO Report No(s): **577914**
**BEU-122/ 2Rp-1623**
Project Address: NM

**Adrian Baker**:

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) 577914. 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. 577914 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,

Jessica Kramer

**Jessica Kramer**
Project Assistant

# Sample Cross Reference 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| SS1 | S | 02-27-18 11:45 | 12 In | 577914-001 |
| SS2 | S | 02-27-18 12:00 | 12 In | 577914-002 |
| SS3 | S | 02-27-18 12:10 | 12 In | 577914-003 |
| SS4 | S | 02-27-18 12:20 | 12 In | 577914-004 |
| SS5 | S | 02-27-18 12:30 | 12 In | 577914-005 |

***Client Name: LT Environmental, Inc.***
***Project Name: BEU-122/ 2Rp-1623***

Project ID:
Work Order Number(s): *577914*

Report Date: *09-MAR-18*
Date Received: *03/01/2018*

**Sample receipt non conformances and comments:**

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

None

**Analytical non conformances and comments:**
Batch: LBA-3042981 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

# Certificate of Analysis Summary 577914

## LT Environmental, Inc., Arvada, CO

## Project Name: BEU-122/ 2Rp-1623

**Project Id:**
**Contact:** Adrian Baker
**Project Location:** NM

**Date Received in Lab:** Thu Mar-01-18 01:10 pm
**Report Date:** 09-MAR-18
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 577914-001 | | 577914-002 | | 577914-003 | | 577914-004 | | 577914-005 | |
| | ***Field Id:*** | SS1 | | SS2 | | SS3 | | SS4 | | SS5 | |
| | ***Depth:*** | 12- In | | 12- In | | 12- In | | 12- In | | 12- In | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Feb-27-18 11:45 | | Feb-27-18 12:00 | | Feb-27-18 12:10 | | Feb-27-18 12:20 | | Feb-27-18 12:30 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Mar-06-18 15:00 | | Mar-06-18 15:00 | | Mar-06-18 15:00 | | Mar-06-18 15:00 | | Mar-06-18 15:00 | |
| | ***Analyzed:*** | Mar-07-18 14:39 | | Mar-07-18 14:40 | | Mar-07-18 14:40 | | Mar-07-18 14:40 | | Mar-07-18 14:40 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| Toluene | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| Ethylbenzene | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| m,p-Xylenes | | <0.00403 | 0.00403 | <0.00397 | 0.00397 | <0.00396 | 0.00396 | <0.00402 | 0.00402 | <0.00404 | 0.00404 |
| o-Xylene | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| Total Xylenes | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| Total BTEX | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00201 | 0.00201 | <0.00202 | 0.00202 |
| **Inorganic Anions by EPA 300** | ***Extracted:*** | Mar-07-18 13:00 | | Mar-07-18 13:00 | | Mar-07-18 13:00 | | Mar-07-18 13:00 | | Mar-07-18 18:00 | |
| | ***Analyzed:*** | Mar-09-18 00:21 | | Mar-09-18 00:26 | | Mar-09-18 00:31 | | Mar-09-18 00:36 | | ** ** ** ** | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 9870 | 100 | 68.4 | 4.95 | <4.99 | 4.99 | 20400 | 248 | 13700 | 99.8 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Mar-06-18 16:00 | | Mar-06-18 16:00 | | Mar-06-18 16:00 | | Mar-06-18 16:00 | | Mar-06-18 16:00 | |
| | ***Analyzed:*** | Mar-07-18 02:56 | | Mar-07-18 03:21 | | Mar-07-18 03:49 | | Mar-07-18 04:16 | | Mar-07-18 05:35 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <14.9 | 14.9 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Diesel Range Organics (DRO) | | 1830 | 14.9 | <15.0 | 15.0 | <14.9 | 14.9 | 99.0 | 15.0 | <15.0 | 15.0 |
| Oil Range Hydrocarbons (ORO) | | 79.4 | 14.9 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Total TPH | | 1910 | 14.9 | <15.0 | 15.0 | <14.9 | 14.9 | 99.0 | 15.0 | <15.0 | 15.0 |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS1** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-001 | Date Collected: | 02.27.18 11.45 | Sample Depth: | 12 In |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | OJS | | | % Moisture: | |
| Analyst: | OJS | Date Prep: | 03.07.18 13.00 | Basis: | Wet Weight |
| Seq Number: | 3043195 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **9870** | 100 | mg/kg | 03.09.18 00.21 | | 20 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 03.06.18 16.00 | Basis: | Wet Weight |
| Seq Number: | 3042997 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <14.9 | 14.9 | mg/kg | 03.07.18 02.56 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **1830** | 14.9 | mg/kg | 03.07.18 02.56 | | 1 |
| **Oil Range Hydrocarbons (ORO)** | PHCG2835 | **79.4** | 14.9 | mg/kg | 03.07.18 02.56 | | 1 |
| **Total TPH** | PHC635 | **1910** | 14.9 | mg/kg | 03.07.18 02.56 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 107 | % | 70-135 | 03.07.18 02.56 | |
| o-Terphenyl | 84-15-1 | 107 | % | 70-135 | 03.07.18 02.56 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS1** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-001 | Date Collected: | 02.27.18 11.45 | Sample Depth: | 12 In |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 03.06.18 15.00 | Basis: | Wet Weight |
| Seq Number: | 3042981 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 03.07.18 14.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 83 | % | 70-130 | 03.07.18 14.39 | |
| 4-Bromofluorobenzene | 460-00-4 | 109 | % | 70-130 | 03.07.18 14.39 | |

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

Sample Id: **SS2** Matrix: Soil Date Received:03.01.18 13.10

Lab Sample Id: 577914-002 Date Collected: 02.27.18 12.00 Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Analyst: OJS Date Prep: 03.07.18 13.00 Basis: Wet Weight

Seq Number: 3043195

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **68.4** | 4.95 | mg/kg | 03.09.18 00.26 | | 1 |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 03.06.18 16.00 Basis: Wet Weight

Seq Number: 3042997

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 03.07.18 03.21 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 03.07.18 03.21 | U | 1 |
| Oil Range Hydrocarbons (ORO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 03.07.18 03.21 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 03.07.18 03.21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 03.07.18 03.21 | |
| o-Terphenyl | 84-15-1 | 103 | % | 70-135 | 03.07.18 03.21 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS2** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-002 | Date Collected: | 02.27.18 12.00 | Sample Depth: | 12 In |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 03.06.18 15.00 | Basis: | Wet Weight |
| Seq Number: | 3042981 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 03.07.18 14.40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 82 | % | 70-130 | 03.07.18 14.40 | |
| 4-Bromofluorobenzene | 460-00-4 | 111 | % | 70-130 | 03.07.18 14.40 | |

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

Sample Id: **SS3** Matrix: Soil Date Received:03.01.18 13.10
Lab Sample Id: 577914-003 Date Collected: 02.27.18 12.10 Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: OJS % Moisture:
Analyst: OJS Date Prep: 03.07.18 13.00 Basis: Wet Weight
Seq Number: 3043195

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Chloride | 16887-00-6 | <4.99 | 4.99 | mg/kg | 03.09.18 00.31 | U | 1 |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 03.06.18 16.00 Basis: Wet Weight
Seq Number: 3042997

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <14.9 | 14.9 | mg/kg | 03.07.18 03.49 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <14.9 | 14.9 | mg/kg | 03.07.18 03.49 | U | 1 |
| Oil Range Hydrocarbons (ORO) | PHCG2835 | <14.9 | 14.9 | mg/kg | 03.07.18 03.49 | U | 1 |
| Total TPH | PHC635 | <14.9 | 14.9 | mg/kg | 03.07.18 03.49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 90 | % | 70-135 | 03.07.18 03.49 | |
| o-Terphenyl | 84-15-1 | 84 | % | 70-135 | 03.07.18 03.49 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS3** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-003 | Date Collected: | 02.27.18 12.10 | Sample Depth: | 12 In |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 03.06.18 15.00 | Basis: | Wet Weight |
| Seq Number: | 3042981 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00396 | 0.00396 | mg/kg | 03.07.18 14.40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 03.07.18 14.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 82 | % | 70-130 | 03.07.18 14.40 | |
| 4-Bromofluorobenzene | 460-00-4 | 110 | % | 70-130 | 03.07.18 14.40 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS4** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-004 | Date Collected: | 02.27.18 12.20 | Sample Depth: | 12 In |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | OJS | | | % Moisture: | |
| Analyst: | OJS | Date Prep: | 03.07.18 13.00 | Basis: | Wet Weight |
| Seq Number: | 3043195 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **20400** | 248 | mg/kg | 03.09.18 00.36 | | 50 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 03.06.18 16.00 | Basis: | Wet Weight |
| Seq Number: | 3042997 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 03.07.18 04.16 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **99.0** | 15.0 | mg/kg | 03.07.18 04.16 | | 1 |
| Oil Range Hydrocarbons (ORO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 03.07.18 04.16 | U | 1 |
| **Total TPH** | PHC635 | **99.0** | 15.0 | mg/kg | 03.07.18 04.16 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 112 | % | 70-135 | 03.07.18 04.16 | |
| o-Terphenyl | 84-15-1 | 114 | % | 70-135 | 03.07.18 04.16 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS4** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-004 | Date Collected: | 02.27.18 12.20 | Sample Depth: | 12 In |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 03.06.18 15.00 | Basis: | Wet Weight |
| Seq Number: | 3042981 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 03.07.18 14.40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total BTEX | | <0.00201 | 0.00201 | mg/kg | 03.07.18 14.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 80 | % | 70-130 | 03.07.18 14.40 | |
| 4-Bromofluorobenzene | 460-00-4 | 109 | % | 70-130 | 03.07.18 14.40 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS5** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-005 | Date Collected: | 02.27.18 12.30 | Sample Depth: | 12 In |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | OJS | | | % Moisture: | |
| Analyst: | OJS | Date Prep: | 03.07.18 18.00 | Basis: | Wet Weight |
| Seq Number: | 3043098 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **13700** | 99.8 | mg/kg | 03.07.18 17.43 | | 20 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 03.06.18 16.00 | Basis: | Wet Weight |
| Seq Number: | 3042997 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 03.07.18 05.35 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 03.07.18 05.35 | U | 1 |
| Oil Range Hydrocarbons (ORO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 03.07.18 05.35 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 03.07.18 05.35 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 112 | % | 70-135 | 03.07.18 05.35 | |
| o-Terphenyl | 84-15-1 | 113 | % | 70-135 | 03.07.18 05.35 | |

# Certificate of Analytical Results 577914

## LT Environmental, Inc., Arvada, CO

BEU-122/ 2Rp-1623

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS5** | Matrix: | Soil | Date Received: | 03.01.18 13.10 |
| Lab Sample Id: | 577914-005 | Date Collected: | 02.27.18 12.30 | Sample Depth: | 12 In |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 03.06.18 15.00 | Basis: | Wet Weight |
| Seq Number: | 3042981 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00404 | 0.00404 | mg/kg | 03.07.18 14.40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 03.07.18 14.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 71 | % | 70-130 | 03.07.18 14.40 | |
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 70-130 | 03.07.18 14.40 | |

# 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 577914

## LT Environmental, Inc.

BEU-122/ 2Rp-1623

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043195 Matrix: Solid Date Prep: 03.07.18
MB Sample Id: 7640425-1-BLK LCS Sample Id: 7640425-1-BKS LCSD Sample Id: 7640425-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 275 | 110 | 275 | 110 | 90-110 | 0 | 20 | mg/kg | 03.08.18 21:52 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043098 Matrix: Solid Date Prep: 03.07.18
MB Sample Id: 7640352-1-BLK LCS Sample Id: 7640352-1-BKS LCSD Sample Id: 7640352-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 255 | 102 | 274 | 110 | 90-110 | 7 | 20 | mg/kg | 03.07.18 15:57 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043195 Matrix: Soil Date Prep: 03.07.18
Parent Sample Id: 577911-001 MS Sample Id: 577911-001 S MSD Sample Id: 577911-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 199 | 246 | 470 | 110 | 478 | 113 | 90-110 | 2 | 20 | mg/kg | 03.08.18 22:19 | X |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043195 Matrix: Soil Date Prep: 03.07.18
Parent Sample Id: 577913-001 MS Sample Id: 577913-001 S MSD Sample Id: 577913-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.90 | 245 | 263 | 107 | 260 | 106 | 90-110 | 1 | 20 | mg/kg | 03.08.18 23:33 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043098 Matrix: Soil Date Prep: 03.07.18
Parent Sample Id: 577915-002 MS Sample Id: 577915-002 S MSD Sample Id: 577915-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.92 | 246 | 334 | 136 | 289 | 117 | 90-110 | 14 | 20 | mg/kg | 03.07.18 16:13 | X |

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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 577914

## LT Environmental, Inc.

BEU-122/ 2Rp-1623

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043098 Matrix: Soil Date Prep: 03.07.18
Parent Sample Id: 577915-004 MS Sample Id: 577915-004 S MSD Sample Id: 577915-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.90 | 245 | 292 | 119 | 267 | 109 | 90-110 | 9 | 20 | mg/kg | 03.07.18 17:27 | X |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3042997 Matrix: Solid Date Prep: 03.06.18
MB Sample Id: 7640327-1-BLK LCS Sample Id: 7640327-1-BKS LCSD Sample Id: 7640327-1-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) | <15.0 | 1000 | 1040 | 104 | 1030 | 103 | 70-135 | 1 | 35 | mg/kg | 03.06.18 22:30 | |
| Diesel Range Organics (DRO) | <15.0 | 1000 | 1090 | 109 | 1070 | 107 | 70-135 | 2 | 35 | mg/kg | 03.06.18 22:30 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | | 120 | | 117 | | 70-135 | % | 03.06.18 22:30 |
| o-Terphenyl | 103 | | 116 | | 111 | | 70-135 | % | 03.06.18 22:30 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3042997 Matrix: Soil Date Prep: 03.06.18
Parent Sample Id: 577908-002 MS Sample Id: 577908-002 S MSD Sample Id: 577908-002 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) | <15.0 | 999 | 1050 | 105 | 1020 | 102 | 70-135 | 3 | 35 | mg/kg | 03.07.18 00:15 | |
| Diesel Range Organics (DRO) | <15.0 | 999 | 1080 | 108 | 1050 | 105 | 70-135 | 3 | 35 | mg/kg | 03.07.18 00:15 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 116 | | 111 | | 70-135 | % | 03.07.18 00:15 |
| o-Terphenyl | 115 | | 110 | | 70-135 | % | 03.07.18 00:15 |

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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 577914

## LT Environmental, Inc.

BEU-122/ 2Rp-1623

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3042981 Matrix: Solid Date Prep: 03.06.18

MB Sample Id: 7640285-1-BLK LCS Sample Id: 7640285-1-BKS LCSD Sample Id: 7640285-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00201 | 0.100 | 0.0849 | 85 | 0.0857 | 85 | 70-130 | 1 | 35 | mg/kg | 03.07.18 14:39 | |
| Toluene | <0.00201 | 0.100 | 0.0850 | 85 | 0.0856 | 85 | 70-130 | 1 | 35 | mg/kg | 03.07.18 14:39 | |
| Ethylbenzene | <0.00201 | 0.100 | 0.0875 | 88 | 0.0886 | 88 | 70-130 | 1 | 35 | mg/kg | 03.07.18 14:39 | |
| m,p-Xylenes | <0.00402 | 0.201 | 0.171 | 85 | 0.173 | 86 | 70-130 | 1 | 35 | mg/kg | 03.07.18 14:39 | |
| o-Xylene | <0.00201 | 0.100 | 0.0866 | 87 | 0.0876 | 87 | 70-130 | 1 | 35 | mg/kg | 03.07.18 14:39 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 81 | | 85 | | 91 | | 70-130 | % | 03.07.18 14:39 |
| 4-Bromofluorobenzene | 108 | | 109 | | 113 | | 70-130 | % | 03.07.18 14:39 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3042981 Matrix: Soil Date Prep: 03.06.18

Parent Sample Id: 577912-004 MS Sample Id: 577912-004 S MSD Sample Id: 577912-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | 0.101 | 0.0612 | 61 | 0.0529 | 52 | 70-130 | 15 | 35 | mg/kg | 03.07.18 14:39 | X |
| Toluene | <0.00202 | 0.101 | 0.0490 | 49 | 0.0402 | 40 | 70-130 | 20 | 35 | mg/kg | 03.07.18 14:39 | X |
| Ethylbenzene | <0.00202 | 0.101 | 0.0494 | 49 | 0.0398 | 39 | 70-130 | 22 | 35 | mg/kg | 03.07.18 14:39 | X |
| m,p-Xylenes | <0.00403 | 0.202 | 0.0917 | 45 | 0.0742 | 37 | 70-130 | 21 | 35 | mg/kg | 03.07.18 14:39 | X |
| o-Xylene | <0.00202 | 0.101 | 0.0518 | 51 | 0.0429 | 42 | 70-130 | 19 | 35 | mg/kg | 03.07.18 14:39 | X |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 71 | | 99 | | 70-130 | % | 03.07.18 14:39 |
| 4-Bromofluorobenzene | 101 | | 128 | | 70-130 | % | 03.07.18 14:39 |

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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

XENCO LABORATORIES

*Setting the Standard since 1990*

Page ___ Of ___

Revision 2016.1

Stafford, TX (281) 240-4200 | Dallas, TX (214) 902-0300 | El Paso, TX (915) 585-3443 | Lubbock, TX (806) 794-1296 | Midland, TX (432) 704-5440 | San Antonio, TX (210) 509-3334 | Phoenix, AZ (480) 355-0900 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Amarillo, TX (806)678-4514 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote #: | Xenco Job #: 577914

**Client / Reporting Information**

Company Name / Branch: CTE / permian
Company Address: 3300 N. A. Street Bld 1 #103
Email: abauer@ltenv.com Phone No:
Project Contact: ~~Abi~~ adnan Bauer
Samplers's Name: AC

**Project Information**

Project Name/Number: BEU-122 / ZRP-1623
Project Location: NM
Invoice To: XTO energy - Kyle Cittrell
PO Number: 30-015-27454

**Analytical Information**

BTEX 8021
TPH 8015
Chloride 300.1

**Matrix Codes**

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

| No. | Field ID / Point of Collection | Collection: Sample Depth | Collection: Date | Collection: Time | Matrix | # of bottles | Number of preserved bottles: HCl | NaOH/Zn Acetate | HNO3 | H2SO4 | NaOH | NaHSO4 | MEOH | NONE | Field Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SS1 | 12' | 2/27 | 1145 | S | 1 | | | | | | | | X | |
| 2 | SS2 | 12" | | 1200 | | | | | | | | | | | |
| 3 | SS3 | 15" | | 1210 | | | | | | | | | | | |
| 4 | SS4 | 12" | | 1220 | | | | | | | | | | | |
| 5 | SS5 | 12" | | 1230 | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |

**Turnaround Time ( Business days)**

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY
- [X] Standard

TAT Starts Day received by Lab, if received by 5:00 pm

**Data Deliverable Information**

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

**Notes:**

Temp: 3.4 IR ID:R-8
CF:(0-6: -0.2°C )
(6-23: +0.2°C)
Corrected Temp: 3.2

FED-EX / UPS: Tracking #

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY**

| | Relinquished by | Date Time | Received By |
|---|---|---|---|
| 1 | Sampler: AC | 2/28 1530 | |
| 2 | | | 2/28 730 |
| 3 | | 3/1 1310 | |
| 4 | | | |
| 5 | | | |

Custody Seal # | Preserved where applicable | On Ice | Cooler Temp. | Thermo. Corr. Factor

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 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

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

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 03/01/2018 01:10:00 PM

**Work Order #:** 577914

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : R8**

| Sample Receipt Checklist | | Comments |
|---|---|---|
| #1 *Temperature of cooler(s)? | 3.2 | |
| #2 *Shipping container in good condition? | **Yes** | |
| #3 *Samples received on ice? | **Yes** | |
| #4 *Custody Seals intact on shipping container/ cooler? | **N/A** | |
| #5 Custody Seals intact on sample bottles? | **N/A** | |
| #6*Custody Seals Signed and dated? | **N/A** | |
| #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? | **No** | TPH received in bulk jars |
| #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:** Connie Hernandez Date: 03/01/2018

**Checklist reviewed by:** Jessica Kramer Date: 03/01/2018

Jessica Kramer

# Analytical Report 600814

## for

## LT Environmental, Inc.

**Project Manager: Adrian Baker**

**BEU-122**

**12918071**

**10-OCT-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

10-OCT-18

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

Reference: XENCO Report No(s): **600814**
**BEU-122**
Project Address: Delaware Basin

**Adrian Baker**:

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) 600814. 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. 600814 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,

Jessica Kramer

**Jessica Kramer**
Project Assistant

# Sample Cross Reference 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| FS01 | S | 09-27-18 12:00 | 2 ft | 600814-001 |
| FS02 | S | 09-27-18 12:05 | 2 ft | 600814-002 |
| FS03 | S | 09-27-18 12:15 | 2 ft | 600814-003 |
| FS04 | S | 09-27-18 12:20 | 2 ft | 600814-004 |
| FS05 | S | 09-27-18 12:30 | 3 ft | 600814-005 |
| SW01 | S | 09-27-18 13:00 | 1 ft | 600814-006 |
| SW02 | S | 09-27-18 13:05 | 1 ft | 600814-007 |
| SW03 | S | 09-27-18 13:10 | 1 ft | 600814-008 |
| SW04 | S | 09-27-18 13:15 | 1 ft | 600814-009 |
| SW05 | S | 09-27-18 13:20 | 1 ft | 600814-010 |
| SW06 | S | 09-27-18 14:00 | 3 - 7 ft | 600814-011 |
| FS06 | S | 09-27-18 13:50 | 8 ft | 600814-012 |
| SW07 | S | 09-27-18 14:10 | 3 - 7 ft | 600814-013 |
| FS07 | S | 09-27-18 14:05 | 8 ft | 600814-014 |
| SW08 | S | 09-27-18 14:35 | 3 - 7 ft | 600814-015 |
| FS08 | S | 09-27-18 14:25 | 8 ft | 600814-016 |
| SW09 | S | 09-27-18 14:45 | 3 - 7 ft | 600814-017 |

**Sample receipt non conformances and comments:**

Per clients email, corrected sample 011 from SW07 to SW06. NEW VERSION GENERATED. JKR 10/10/18

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

None

**Analytical non conformances and comments:**

Batch: LBA-3065657 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 600594-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 600594-001, -002, -003, -004.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3065828 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 600814-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 600814-013, -014, -015, -016, -017.
The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

# Certificate of Analysis Summary 600814

## LT Environmental, Inc., Arvada, CO

## Project Name: BEU-122

**Project Id:** 12918071
**Contact:** Adrian Baker
**Project Location:** Delaware Basin

**Date Received in Lab:** Sat Sep-29-18 09:00 am
**Report Date:** 10-OCT-18
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 600814-001 | | 600814-002 | | 600814-003 | | 600814-004 | | 600814-005 | | 600814-006 | |
| | ***Field Id:*** | FS01 | | FS02 | | FS03 | | FS04 | | FS05 | | SW01 | |
| | ***Depth:*** | 2- ft | | 2- ft | | 2- ft | | 2- ft | | 3- ft | | 1- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Sep-27-18 12:00 | | Sep-27-18 12:05 | | Sep-27-18 12:15 | | Sep-27-18 12:20 | | Sep-27-18 12:30 | | Sep-27-18 13:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | |
| | ***Analyzed:*** | Oct-05-18 22:08 | | Oct-05-18 22:30 | | Oct-05-18 23:35 | | Oct-05-18 23:56 | | Oct-06-18 00:17 | | Oct-06-18 00:39 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| Toluene | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| Ethylbenzene | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| m,p-Xylenes | | <0.00402 | 0.00402 | <0.00404 | 0.00404 | <0.00398 | 0.00398 | <0.00404 | 0.00404 | <0.00398 | 0.00398 | <0.00399 | 0.00399 |
| o-Xylene | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| Total Xylenes | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| Total BTEX | | <0.00201 | 0.00201 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00200 | 0.00200 |
| **Inorganic Anions by EPA 300** | ***Extracted:*** | Oct-03-18 08:30 | | Oct-03-18 08:30 | | Oct-03-18 08:30 | | Oct-03-18 08:30 | | Oct-03-18 08:30 | | Oct-03-18 08:30 | |
| | ***Analyzed:*** | Oct-03-18 12:16 | | Oct-03-18 12:22 | | Oct-03-18 12:28 | | Oct-03-18 12:33 | | Oct-03-18 12:39 | | Oct-03-18 12:45 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 11.5 | 4.95 | <4.99 | 4.99 | 2050 | 24.8 | 1010 | 4.99 | 128 | 4.95 | 246 | 4.95 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | |
| | ***Analyzed:*** | Oct-02-18 09:23 | | Oct-02-18 10:18 | | Oct-02-18 10:37 | | Oct-02-18 10:55 | | Oct-02-18 11:14 | | Oct-02-18 11:32 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | <15.0 | 15.0 | 73.7 | 15.0 | 27.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Total TPH | | <15.0 | 15.0 | <15.0 | 15.0 | 73.7 | 15.0 | 27.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 600814

## LT Environmental, Inc., Arvada, CO

## Project Name: BEU-122

**Project Id:** 12918071
**Contact:** Adrian Baker
**Project Location:** Delaware Basin

**Date Received in Lab:** Sat Sep-29-18 09:00 am
**Report Date:** 10-OCT-18
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 600814-007 | | 600814-008 | | 600814-009 | | 600814-010 | | 600814-011 | | 600814-012 | |
| | ***Field Id:*** | SW02 | | SW03 | | SW04 | | SW05 | | SW06 | | FS06 | |
| | ***Depth:*** | 1- ft | | 1- ft | | 1- ft | | 1- ft | | 3-7 ft | | 8- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Sep-27-18 13:05 | | Sep-27-18 13:10 | | Sep-27-18 13:15 | | Sep-27-18 13:20 | | Sep-27-18 14:00 | | Sep-27-18 13:50 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | | Oct-05-18 14:00 | |
| | ***Analyzed:*** | Oct-06-18 01:00 | | Oct-06-18 01:22 | | Oct-06-18 01:42 | | Oct-06-18 02:04 | | Oct-06-18 02:25 | | Oct-06-18 02:46 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| Toluene | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| Ethylbenzene | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| m,p-Xylenes | | <0.00401 | 0.00401 | <0.00404 | 0.00404 | <0.00399 | 0.00399 | <0.00400 | 0.00400 | <0.00398 | 0.00398 | <0.00403 | 0.00403 |
| o-Xylene | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| Total Xylenes | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| Total BTEX | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 |
| **Inorganic Anions by EPA 300** | ***Extracted:*** | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | |
| | ***Analyzed:*** | Oct-03-18 13:19 | | Oct-03-18 13:36 | | Oct-03-18 13:41 | | Oct-03-18 13:47 | | Oct-03-18 13:53 | | Oct-03-18 14:10 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 133 | 4.96 | 871 | 4.97 | 867 | 4.97 | 564 | 4.98 | 809 | 5.00 | 752 | 4.95 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | |
| | ***Analyzed:*** | Oct-02-18 11:50 | | Oct-02-18 12:09 | | Oct-02-18 12:28 | | Oct-02-18 12:47 | | Oct-02-18 13:43 | | Oct-02-18 14:02 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | 25.1 | 14.9 |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 |
| Total TPH | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | 25.1 | 14.9 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 600814

## LT Environmental, Inc., Arvada, CO

## Project Name: BEU-122

**Project Id:** 12918071
**Contact:** Adrian Baker
**Project Location:** Delaware Basin

**Date Received in Lab:** Sat Sep-29-18 09:00 am
**Report Date:** 10-OCT-18
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 600814-013 | | 600814-014 | | 600814-015 | | 600814-016 | | 600814-017 | | | | | | | |
| | ***Field Id:*** | SW07 | | FS07 | | SW08 | | FS08 | | SW09 | | | | | | | |
| | ***Depth:*** | 3-7 ft | | 8- ft | | 3-7 ft | | 8- ft | | 3-7 ft | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | | | | | | |
| | ***Sampled:*** | Sep-27-18 14:10 | | Sep-27-18 14:05 | | Sep-27-18 14:35 | | Sep-27-18 14:25 | | Sep-27-18 14:45 | | | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Oct-08-18 08:30 | | Oct-08-18 08:30 | | Oct-08-18 08:30 | | Oct-08-18 08:30 | | Oct-08-18 08:30 | | | | | | | |
| | ***Analyzed:*** | Oct-08-18 12:45 | | Oct-08-18 13:05 | | Oct-08-18 12:25 | | Oct-08-18 13:25 | | Oct-08-18 13:45 | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | | | |
| Benzene | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| Toluene | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| Ethylbenzene | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| m,p-Xylenes | | <0.00399 | 0.00399 | <0.00401 | 0.00401 | <0.00402 | 0.00402 | <0.00397 | 0.00397 | <0.00398 | 0.00398 | | | | | | |
| o-Xylene | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| Total Xylenes | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| Total BTEX | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | | | | | | |
| **Inorganic Anions by EPA 300** | ***Extracted:*** | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | Oct-03-18 09:00 | | | | | | | |
| | ***Analyzed:*** | Oct-03-18 14:15 | | Oct-03-18 14:21 | | Oct-03-18 14:27 | | Oct-03-18 14:39 | | Oct-03-18 14:44 | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | | | |
| Chloride | | 156 | 4.98 | 1000 | 5.01 | 1090 | 5.01 | 754 | 4.99 | 336 | 4.95 | | | | | | |
| **TPH by SW8015 Mod** | ***Extracted:*** | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | Oct-02-18 07:00 | | | | | | | |
| | ***Analyzed:*** | Oct-02-18 14:21 | | Oct-02-18 14:39 | | Oct-02-18 14:58 | | Oct-02-18 15:17 | | Oct-02-18 15:36 | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | | | | | | |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | 29.8 | 15.0 | <15.0 | 15.0 | 23.2 | 15.0 | <15.0 | 15.0 | | | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | | | | | | |
| Total TPH | | <15.0 | 15.0 | 29.8 | 15.0 | <15.0 | 15.0 | 23.2 | 15.0 | <15.0 | 15.0 | | | | | | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS01** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-001 | Date Collected: | 09.27.18 12.00 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **11.5** | 4.95 | mg/kg | 10.03.18 12.16 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 09.23 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 09.23 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 09.23 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 09.23 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 10.02.18 09.23 | |
| o-Terphenyl | 84-15-1 | 96 | % | 70-135 | 10.02.18 09.23 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS01** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-001 | Date Collected: | 09.27.18 12.00 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 10.05.18 22.08 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |
| Total BTEX | | <0.00201 | 0.00201 | mg/kg | 10.05.18 22.08 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 117 | % | 70-130 | 10.05.18 22.08 | |
| 4-Bromofluorobenzene | 460-00-4 | 93 | % | 70-130 | 10.05.18 22.08 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS02** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-002 | Date Collected: | 09.27.18 12.05 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Chloride | 16887-00-6 | <4.99 | 4.99 | mg/kg | 10.03.18 12.22 | U | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 10.18 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 10.18 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 10.18 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 10.18 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 10.02.18 10.18 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 10.02.18 10.18 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS02** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-002 | Date Collected: | 09.27.18 12.05 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00404 | 0.00404 | mg/kg | 10.05.18 22.30 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 10.05.18 22.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 94 | % | 70-130 | 10.05.18 22.30 | |
| 1,4-Difluorobenzene | 540-36-3 | 117 | % | 70-130 | 10.05.18 22.30 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS03** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-003 | Date Collected: | 09.27.18 12.15 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2050** | 24.8 | mg/kg | 10.03.18 12.28 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 10.37 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **73.7** | 15.0 | mg/kg | 10.02.18 10.37 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 10.37 | U | 1 |
| **Total TPH** | PHC635 | **73.7** | 15.0 | mg/kg | 10.02.18 10.37 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 93 | % | 70-135 | 10.02.18 10.37 | |
| o-Terphenyl | 84-15-1 | 99 | % | 70-135 | 10.02.18 10.37 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS03** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-003 | Date Collected: | 09.27.18 12.15 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.05.18 23.35 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.05.18 23.35 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 107 | % | 70-130 | 10.05.18 23.35 | |
| 4-Bromofluorobenzene | 460-00-4 | 86 | % | 70-130 | 10.05.18 23.35 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS04** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-004 | Date Collected: | 09.27.18 12.20 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1010** | 4.99 | mg/kg | 10.03.18 12.33 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <14.9 | 14.9 | mg/kg | 10.02.18 10.55 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **27.9** | 14.9 | mg/kg | 10.02.18 10.55 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <14.9 | 14.9 | mg/kg | 10.02.18 10.55 | U | 1 |
| **Total TPH** | PHC635 | **27.9** | 14.9 | mg/kg | 10.02.18 10.55 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 89 | % | 70-135 | 10.02.18 10.55 | |
| o-Terphenyl | 84-15-1 | 94 | % | 70-135 | 10.02.18 10.55 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS04** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-004 | Date Collected: | 09.27.18 12.20 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00404 | 0.00404 | mg/kg | 10.05.18 23.56 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 10.05.18 23.56 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 98 | % | 70-130 | 10.05.18 23.56 | |
| 1,4-Difluorobenzene | 540-36-3 | 122 | % | 70-130 | 10.05.18 23.56 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS05** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-005 | Date Collected: | 09.27.18 12.30 | Sample Depth: | 3 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **128** | 4.95 | mg/kg | 10.03.18 12.39 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 11.14 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 11.14 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 11.14 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 11.14 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 93 | % | 70-135 | 10.02.18 11.14 | |
| o-Terphenyl | 84-15-1 | 96 | % | 70-135 | 10.02.18 11.14 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS05** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-005 | Date Collected: | 09.27.18 12.30 | Sample Depth: | 3 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.06.18 00.17 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.06.18 00.17 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 97 | % | 70-130 | 10.06.18 00.17 | |
| 1,4-Difluorobenzene | 540-36-3 | 116 | % | 70-130 | 10.06.18 00.17 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW01** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-006 | Date Collected: | 09.27.18 13.00 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065318 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **246** | 4.95 | mg/kg | 10.03.18 12.45 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 11.32 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 11.32 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 11.32 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 11.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 88 | % | 70-135 | 10.02.18 11.32 | |
| o-Terphenyl | 84-15-1 | 89 | % | 70-135 | 10.02.18 11.32 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW01** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-006 | Date Collected: | 09.27.18 13.00 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 10.06.18 00.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.06.18 00.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 123 | % | 70-130 | 10.06.18 00.39 | |
| 4-Bromofluorobenzene | 460-00-4 | 104 | % | 70-130 | 10.06.18 00.39 | |

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW02** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-007 | Date Collected: | 09.27.18 13.05 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **133** | 4.96 | mg/kg | 10.03.18 13.19 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 11.50 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 11.50 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 11.50 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 11.50 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 10.02.18 11.50 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 10.02.18 11.50 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW02** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-007 | Date Collected: | 09.27.18 13.05 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00401 | 0.00401 | mg/kg | 10.06.18 01.00 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.00 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 97 | % | 70-130 | 10.06.18 01.00 | |
| 1,4-Difluorobenzene | 540-36-3 | 118 | % | 70-130 | 10.06.18 01.00 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW03** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-008 | Date Collected: | 09.27.18 13.10 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **871** | 4.97 | mg/kg | 10.03.18 13.36 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 12.09 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 12.09 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 12.09 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 12.09 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 87 | % | 70-135 | 10.02.18 12.09 | |
| o-Terphenyl | 84-15-1 | 91 | % | 70-135 | 10.02.18 12.09 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW03** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-008 | Date Collected: | 09.27.18 13.10 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00404 | 0.00404 | mg/kg | 10.06.18 01.22 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 10.06.18 01.22 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 109 | % | 70-130 | 10.06.18 01.22 | |
| 4-Bromofluorobenzene | 460-00-4 | 102 | % | 70-130 | 10.06.18 01.22 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW04** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-009 | Date Collected: | 09.27.18 13.15 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **867** | 4.97 | mg/kg | 10.03.18 13.41 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 12.28 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 12.28 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 12.28 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 12.28 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 86 | % | 70-135 | 10.02.18 12.28 | |
| o-Terphenyl | 84-15-1 | 86 | % | 70-135 | 10.02.18 12.28 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW04** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-009 | Date Collected: | 09.27.18 13.15 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 10.06.18 01.42 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.06.18 01.42 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 97 | % | 70-130 | 10.06.18 01.42 | |
| 1,4-Difluorobenzene | 540-36-3 | 127 | % | 70-130 | 10.06.18 01.42 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW05** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-010 | Date Collected: | 09.27.18 13.20 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **564** | 4.98 | mg/kg | 10.03.18 13.47 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 12.47 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 12.47 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 12.47 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 12.47 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 85 | % | 70-135 | 10.02.18 12.47 | |
| o-Terphenyl | 84-15-1 | 86 | % | 70-135 | 10.02.18 12.47 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW05** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-010 | Date Collected: | 09.27.18 13.20 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 10.06.18 02.04 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.06.18 02.04 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 125 | % | 70-130 | 10.06.18 02.04 | |
| 4-Bromofluorobenzene | 460-00-4 | 104 | % | 70-130 | 10.06.18 02.04 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW06** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-011 | Date Collected: | 09.27.18 14.00 | Sample Depth: | 3 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **809** | 5.00 | mg/kg | 10.03.18 13.53 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 13.43 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 13.43 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 13.43 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 13.43 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 88 | % | 70-135 | 10.02.18 13.43 | |
| o-Terphenyl | 84-15-1 | 91 | % | 70-135 | 10.02.18 13.43 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW06** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-011 | Date Collected: | 09.27.18 14.00 | Sample Depth: | 3 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.06.18 02.25 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.06.18 02.25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 99 | % | 70-130 | 10.06.18 02.25 | |
| 1,4-Difluorobenzene | 540-36-3 | 125 | % | 70-130 | 10.06.18 02.25 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS06** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-012 | Date Collected: | 09.27.18 13.50 | Sample Depth: | 8 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **752** | 4.95 | mg/kg | 10.03.18 14.10 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <14.9 | 14.9 | mg/kg | 10.02.18 14.02 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **25.1** | 14.9 | mg/kg | 10.02.18 14.02 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <14.9 | 14.9 | mg/kg | 10.02.18 14.02 | U | 1 |
| **Total TPH** | PHC635 | **25.1** | 14.9 | mg/kg | 10.02.18 14.02 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 88 | % | 70-135 | 10.02.18 14.02 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 10.02.18 14.02 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS06** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-012 | Date Collected: | 09.27.18 13.50 | Sample Depth: | 8 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.05.18 14.00 | Basis: | Wet Weight |
| Seq Number: | 3065657 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 10.06.18 02.46 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |
| Total BTEX | | <0.00202 | 0.00202 | mg/kg | 10.06.18 02.46 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 98 | % | 70-130 | 10.06.18 02.46 | |
| 1,4-Difluorobenzene | 540-36-3 | 113 | % | 70-130 | 10.06.18 02.46 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW07** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-013 | Date Collected: | 09.27.18 14.10 | Sample Depth: | 3 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **156** | 4.98 | mg/kg | 10.03.18 14.15 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 14.21 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 14.21 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 14.21 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 14.21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 85 | % | 70-135 | 10.02.18 14.21 | |
| o-Terphenyl | 84-15-1 | 88 | % | 70-135 | 10.02.18 14.21 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW07** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-013 | Date Collected: | 09.27.18 14.10 | Sample Depth: | 3 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.08.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065828 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 10.08.18 12.45 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.08.18 12.45 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 97 | % | 70-130 | 10.08.18 12.45 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 10.08.18 12.45 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS07** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-014 | Date Collected: | 09.27.18 14.05 | Sample Depth: | 8 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1000** | 5.01 | mg/kg | 10.03.18 14.21 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 14.39 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **29.8** | 15.0 | mg/kg | 10.02.18 14.39 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 14.39 | U | 1 |
| **Total TPH** | PHC635 | **29.8** | 15.0 | mg/kg | 10.02.18 14.39 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 87 | % | 70-135 | 10.02.18 14.39 | |
| o-Terphenyl | 84-15-1 | 92 | % | 70-135 | 10.02.18 14.39 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS07** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-014 | Date Collected: | 09.27.18 14.05 | Sample Depth: | 8 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.08.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065828 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00401 | 0.00401 | mg/kg | 10.08.18 13.05 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.08.18 13.05 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 94 | % | 70-130 | 10.08.18 13.05 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 10.08.18 13.05 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW08** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-015 | Date Collected: | 09.27.18 14.35 | Sample Depth: | 3 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1090** | 5.01 | mg/kg | 10.03.18 14.27 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 14.58 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 14.58 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 14.58 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 14.58 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 89 | % | 70-135 | 10.02.18 14.58 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 10.02.18 14.58 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW08** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-015 | Date Collected: | 09.27.18 14.35 | Sample Depth: | 3 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.08.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065828 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 10.08.18 12.25 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |
| Total BTEX | | <0.00201 | 0.00201 | mg/kg | 10.08.18 12.25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 10.08.18 12.25 | |
| 4-Bromofluorobenzene | 460-00-4 | 87 | % | 70-130 | 10.08.18 12.25 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS08** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-016 | Date Collected: | 09.27.18 14.25 | Sample Depth: | 8 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **754** | 4.99 | mg/kg | 10.03.18 14.39 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 15.17 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **23.2** | 15.0 | mg/kg | 10.02.18 15.17 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 15.17 | U | 1 |
| **Total TPH** | PHC635 | **23.2** | 15.0 | mg/kg | 10.02.18 15.17 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 90 | % | 70-135 | 10.02.18 15.17 | |
| o-Terphenyl | 84-15-1 | 93 | % | 70-135 | 10.02.18 15.17 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS08** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-016 | Date Collected: | 09.27.18 14.25 | Sample Depth: | 8 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.08.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065828 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 10.08.18 13.25 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 10.08.18 13.25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 96 | % | 70-130 | 10.08.18 13.25 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 10.08.18 13.25 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW09** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-017 | Date Collected: | 09.27.18 14.45 | Sample Depth: | 3 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300 | | | Prep Method: | E300P |
| Tech: | SCM | | | % Moisture: | |
| Analyst: | SCM | Date Prep: | 10.03.18 09.00 | Basis: | Wet Weight |
| Seq Number: | 3065322 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **336** | 4.95 | mg/kg | 10.03.18 14.44 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | ARM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 10.02.18 07.00 | Basis: | Wet Weight |
| Seq Number: | 3065179 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 10.02.18 15.36 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 10.02.18 15.36 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 10.02.18 15.36 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 10.02.18 15.36 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 88 | % | 70-135 | 10.02.18 15.36 | |
| o-Terphenyl | 84-15-1 | 90 | % | 70-135 | 10.02.18 15.36 | |

# Certificate of Analytical Results 600814

## LT Environmental, Inc., Arvada, CO

BEU-122

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW09** | Matrix: | Soil | Date Received: | 09.29.18 09.00 |
| Lab Sample Id: | 600814-017 | Date Collected: | 09.27.18 14.45 | Sample Depth: | 3 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | ALJ | | | % Moisture: | |
| Analyst: | ALJ | Date Prep: | 10.08.18 08.30 | Basis: | Wet Weight |
| Seq Number: | 3065828 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.08.18 13.45 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.08.18 13.45 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 98 | % | 70-130 | 10.08.18 13.45 | |
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 70-130 | 10.08.18 13.45 | |

# 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 600814

## LT Environmental, Inc.

BEU-122

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065318 Matrix: Solid Date Prep: 10.03.18
MB Sample Id: 7663442-1-BLK LCS Sample Id: 7663442-1-BKS LCSD Sample Id: 7663442-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <4.99 | 250 | 264 | 106 | 264 | 106 | 90-110 | 0 | 20 | mg/kg | 10.03.18 10:00 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065322 Matrix: Solid Date Prep: 10.03.18
MB Sample Id: 7663443-1-BLK LCS Sample Id: 7663443-1-BKS LCSD Sample Id: 7663443-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 266 | 106 | 265 | 106 | 90-110 | 0 | 20 | mg/kg | 10.03.18 13:07 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065318 Matrix: Soil Date Prep: 10.03.18
Parent Sample Id: 600815-003 MS Sample Id: 600815-003 S MSD Sample Id: 600815-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 186 | 248 | 443 | 104 | 443 | 104 | 90-110 | 0 | 20 | mg/kg | 10.03.18 10:17 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065318 Matrix: Soil Date Prep: 10.03.18
Parent Sample Id: 600815-012 MS Sample Id: 600815-012 S MSD Sample Id: 600815-012 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39.3 | 248 | 298 | 104 | 297 | 104 | 90-110 | 0 | 20 | mg/kg | 10.03.18 11:36 | |

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065322 Matrix: Soil Date Prep: 10.03.18
Parent Sample Id: 600814-007 MS Sample Id: 600814-007 S MSD Sample Id: 600814-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 133 | 248 | 395 | 106 | 399 | 107 | 90-110 | 1 | 20 | mg/kg | 10.03.18 13:24 | |

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 600814

## LT Environmental, Inc.

BEU-122

**Analytical Method:** **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3065322 Matrix: Soil Date Prep: 10.03.18
Parent Sample Id: 600814-017 MS Sample Id: 600814-017 S MSD Sample Id: 600814-017 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 336 | 248 | 585 | 100 | 587 | 101 | 90-110 | 0 | 20 | mg/kg | 10.03.18 14:50 | |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3065179 Matrix: Solid Date Prep: 10.02.18
MB Sample Id: 7663403-1-BLK LCS Sample Id: 7663403-1-BKS LCSD Sample Id: 7663403-1-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) | <8.00 | 1000 | 947 | 95 | 944 | 94 | 70-135 | 0 | 20 | mg/kg | 10.02.18 08:45 | |
| Diesel Range Organics (DRO) | <8.13 | 1000 | 962 | 96 | 962 | 96 | 70-135 | 0 | 20 | mg/kg | 10.02.18 08:45 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 93 | | 128 | | 129 | | 70-135 | % | 10.02.18 08:45 |
| o-Terphenyl | 99 | | 113 | | 106 | | 70-135 | % | 10.02.18 08:45 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3065179 Matrix: Soil Date Prep: 10.02.18
Parent Sample Id: 600814-001 MS Sample Id: 600814-001 S MSD Sample Id: 600814-001 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) | 8.10 | 999 | 954 | 95 | 914 | 91 | 70-135 | 4 | 20 | mg/kg | 10.02.18 09:41 | |
| Diesel Range Organics (DRO) | <8.12 | 999 | 951 | 95 | 926 | 93 | 70-135 | 3 | 20 | mg/kg | 10.02.18 09:41 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 128 | | 123 | | 70-135 | % | 10.02.18 09:41 |
| o-Terphenyl | 102 | | 95 | | 70-135 | % | 10.02.18 09:41 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

# QC Summary 600814

## LT Environmental, Inc.

BEU-122

**Analytical Method:** BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3065657 | Matrix: Solid | Date Prep: 10.05.18
MB Sample Id: 7663732-1-BLK | LCS Sample Id: 7663732-1-BKS | LCSD Sample Id: 7663732-1-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 | 0.0998 | 0.0874 | 88 | 0.0926 | 93 | 70-130 | 6 | 35 | mg/kg | 10.05.18 17:10 | |
| Toluene | <0.00200 | 0.0998 | 0.0781 | 78 | 0.0838 | 84 | 70-130 | 7 | 35 | mg/kg | 10.05.18 17:10 | |
| Ethylbenzene | <0.00200 | 0.0998 | 0.0922 | 92 | 0.0991 | 99 | 70-130 | 7 | 35 | mg/kg | 10.05.18 17:10 | |
| m,p-Xylenes | <0.00399 | 0.200 | 0.184 | 92 | 0.199 | 100 | 70-130 | 8 | 35 | mg/kg | 10.05.18 17:10 | |
| o-Xylene | <0.00200 | 0.0998 | 0.0928 | 93 | 0.100 | 100 | 70-130 | 7 | 35 | mg/kg | 10.05.18 17:10 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 123 | | 122 | | 124 | | 70-130 | % | 10.05.18 17:10 |
| 4-Bromofluorobenzene | 94 | | 108 | | 114 | | 70-130 | % | 10.05.18 17:10 |

**Analytical Method:** BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3065828 | Matrix: Solid | Date Prep: 10.08.18
MB Sample Id: 7663817-1-BLK | LCS Sample Id: 7663817-1-BKS | LCSD Sample Id: 7663817-1-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 | 0.0958 | 96 | 0.0995 | 99 | 70-130 | 4 | 35 | mg/kg | 10.08.18 10:25 | |
| Toluene | <0.00200 | 0.100 | 0.0985 | 99 | 0.102 | 101 | 70-130 | 3 | 35 | mg/kg | 10.08.18 10:25 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0971 | 97 | 0.101 | 100 | 70-130 | 4 | 35 | mg/kg | 10.08.18 10:25 | |
| m,p-Xylenes | <0.00401 | 0.200 | 0.187 | 94 | 0.194 | 96 | 70-130 | 4 | 35 | mg/kg | 10.08.18 10:25 | |
| o-Xylene | <0.00200 | 0.100 | 0.0892 | 89 | 0.0930 | 92 | 70-130 | 4 | 35 | mg/kg | 10.08.18 10:25 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 104 | | 92 | | 93 | | 70-130 | % | 10.08.18 10:25 |
| 4-Bromofluorobenzene | 89 | | 79 | | 81 | | 70-130 | % | 10.08.18 10:25 |

**Analytical Method:** BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3065657 | Matrix: Soil | Date Prep: 10.05.18
Parent Sample Id: 600594-001 | MS Sample Id: 600594-001 S | MSD Sample Id: 600594-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00202 | 0.101 | 0.0761 | 75 | 0.0677 | 67 | 70-130 | 12 | 35 | mg/kg | 10.05.18 17:52 | X |
| Toluene | <0.00202 | 0.101 | 0.0544 | 54 | 0.0460 | 46 | 70-130 | 17 | 35 | mg/kg | 10.05.18 17:52 | X |
| Ethylbenzene | <0.00202 | 0.101 | 0.0500 | 50 | 0.0408 | 40 | 70-130 | 20 | 35 | mg/kg | 10.05.18 17:52 | X |
| m,p-Xylenes | <0.00403 | 0.202 | 0.0904 | 45 | 0.0729 | 36 | 70-130 | 21 | 35 | mg/kg | 10.05.18 17:52 | X |
| o-Xylene | <0.00202 | 0.101 | 0.0514 | 51 | 0.0434 | 43 | 70-130 | 17 | 35 | mg/kg | 10.05.18 17:52 | X |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 117 | | 114 | | 70-130 | % | 10.05.18 17:52 |
| 4-Bromofluorobenzene | 111 | | 113 | | 70-130 | % | 10.05.18 17:52 |

MS/MSD Percent Recovery | [D] = 100*(C-A) / B | LCS = Laboratory Control Sample | MS = Matrix Spike
Relative Percent Difference | RPD = 200* | (C-E) / (C+E) | | A = Parent Result | B = Spike Added
LCS/LCSD Recovery | [D] = 100 * (C) / [B] | C = MS/LCS Result | D = MSD/LCSD % Rec
Log Difference | Log Diff. = Log(Sample Duplicate) - Log(Original Sample) | E = MSD/LCSD Result

# QC Summary 600814

## LT Environmental, Inc.

BEU-122

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3065828 Matrix: Soil Date Prep: 10.08.18

Parent Sample Id: 600814-015 MS Sample Id: 600814-015 S MSD Sample Id: 600814-015 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 | 0.0998 | 0.0879 | 88 | 0.0746 | 75 | 70-130 | 16 | 35 | mg/kg | 10.08.18 11:06 | |
| Toluene | <0.00200 | 0.0998 | 0.0810 | 81 | 0.0663 | 66 | 70-130 | 20 | 35 | mg/kg | 10.08.18 11:06 | X |
| Ethylbenzene | <0.00200 | 0.0998 | 0.0714 | 72 | 0.0563 | 56 | 70-130 | 24 | 35 | mg/kg | 10.08.18 11:06 | X |
| m,p-Xylenes | <0.00399 | 0.200 | 0.138 | 69 | 0.108 | 54 | 70-130 | 24 | 35 | mg/kg | 10.08.18 11:06 | X |
| o-Xylene | <0.00200 | 0.0998 | 0.0655 | 66 | 0.0508 | 51 | 70-130 | 25 | 35 | mg/kg | 10.08.18 11:06 | X |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 92 | | 95 | | 70-130 | % | 10.08.18 11:06 |
| 4-Bromofluorobenzene | 86 | | 83 | | 70-130 | % | 10.08.18 11:06 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

# Chain of Custody

Work Order No: 600814

XENCO LABORATORIES

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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| | | | |
|---|---|---|---|
| Project Manager: | Adrian Baker | Bill to: (if different) | Kyle Littrell |
| Company Name: | LT Environmental | Company Name: | XTO |
| Address: | 3300 'A' Street, Building 1, #103 | Address: | |
| City, State ZIP: | Midland, TX 79705 | City, State ZIP: | |
| Phone: | (432) 704-5178 | Email: | ABaker@LTEnv.com |

**Work Order Comments**

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

| | | | |
|---|---|---|---|
| Project Name: | BEU-122 | Turn Around | |
| Project Number: | 01291807I | Routine | ☑ |
| P.O. Number: | 2RP-1623 | Rush: | |
| Sampler's Name: | Fabian Valbarri | Due Date: | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes (No) | Wet Ice: | (Yes) No |
| Temperature (°C): | 8.2 | Thermometer ID: | 108 |
| Received Intact: | (Yes) No | | |
| Cooler Custody Seals: | Yes No (N/A) | Correction Factor: | 0.0 |
| Sample Custody Seals: | Yes (No) N/A | Total Containers: | |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | BTEX (only BTEX) | TPH (DRO)(GRO)(MRO) | Chloride (300.00) | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|
| FS01 | S | 09/27/18 | 1200 | 2' | 1 | X | X | X | Composite sample |
| FS02 | S | 09/27/18 | 1205 | 2' | 1 | X | X | X | Composite sample |
| FS03 | S | 09/27/18 | 1215 | 2' | 1 | X | X | X | " |
| FS04 | S | 09/27/18 | 1220 | 2' | 1 | X | X | X | " |
| FS05 | S | 09/27/18 | 1230 | 3' | 1 | X | X | X | " |
| SW01 | S | 09/27/18 | 1300 | 1' | 1 | X | X | X | " |
| SW02 | S | 09/27/18 | 1305 | 1' | 1 | X | X | X | " |
| SW03 | S | 09/27/18 | 1310 | 1' | 1 | X | X | X | " |
| SW04 | S | 09/27/18 | 1315 | 1' | 1 | X | X | X | " |
| SW05 | S | 09/27/18 | 1320 | 1' | 1 | X | X | X | " |

**Work Order Notes**

TAT starts the day recevied by the lab, if received by 4:30pm

**Sample Comments**

**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 Tl 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 Tl U **1631 / 245.1 / 7470 / 7471** : Hg



| | Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|---|
| 1 | | | 9/27 17:09 | 2 | 9/28 15:30 | 9/29/18 09:00 |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

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# Chain of Custody

XENCO LABORATORIES

Work Order No: 602914

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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| | | | |
|---|---|---|---|
| Project Manager: | Adrian Baker | Bill to: (if different) | Kyle Littrell |
| Company Name: | LT Environmental | Company Name: | XTO |
| Address: | 3300 'A' Street, Building 1, #103 | Address: | |
| City, State ZIP: | Midland TX 79705 | City, State ZIP: | |
| Phone: | (432) 704-5178 Email: | ABaker@LTENV.com | |

**Work Order Comments**

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

| | | | |
|---|---|---|---|
| Project Name: | BEU-122 | Turn Around | |
| Project Number: | 012918071 | Routine | ☑ |
| P.O. Number: | 2RP-1623 | Rush: | |
| Sampler's Name: | Fabian Cubbard | Due Date: | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes (No) | Wet Ice: | (Yes) No |
| Temperature (°C): | 0.0 | Thermometer ID | 102 |
| Received Intact: | (Yes) No | | |
| Cooler Custody Seals: | Yes (No) N/A | Correction Factor: | 0.0 |
| Sample Custody Seals: | Yes (No) N/A | Total Containers: | |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | BTEX (only BTEX) | TPH (DRO)(GRO)(MRO) | Chloride (300.00) | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|
| SW06 | S | 9/27/18 | 1400 | 3-7' | 1 | X | X | X | Composite Samples |
| FS06 | S | 9/27/18 | 1350 | 8' | 1 | X | X | X | " |
| SW07 | S | 9/27/18 | 1410 | 3-7' | 1 | X | X | X | " |
| FS07 | S | 9/27/18 | 1405 | 8' | 1 | X | X | X | " |
| SW08 | S | 9/27/18 | 1435 | 3-7' | 1 | X | X | X | " |
| FS08 | S | 9/27/18 | 1425 | 8' | 1 | X | X | X | " |
| SW09 | S | 9/27/18 | 1445 | 3-7' | 1 | X | X | X | " |

EH 09/27/2018

**Work Order Notes**

TAT starts the day recevied by the lab, if received by 4:30pm

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 Tl 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 Tl U 1631 / 245.1 / 7470 / 7471 : Hg



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | Cami Wilson | 9/27 17:09 | 2 Cami Wilson 9/28 15:30 | | 9/29/18 0900 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date 051418 Rev. 2018.1

Final 1.001

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ORIGIN ID:CAOA (575) 887-6245
XENCO SATURDAY
PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 28SEP18
ACTWGT: 52.00 LB
CAD: 101813706/INET4040
DIMS: 26x14x14 IN

BILL RECIPIENT

TO **HOLD FOR XENCO**
**FEDEX OFFICE PRINT & SHIP CENTER**
**FEDEX OFFICE PRINT & SHIP CENTER**
**200 W INTERSTATE 20**

**MIDLAND TX 79701**
(806) 674-0639
INV:
PO:
REF: XENCO
DEPT:

552J1/F78C/DCA5

J1821180815O1uv

FedEx Express

**SATURDAY HOLD**

**PRIORITY OVERNIGHT**

TRK# 0201 **7733 5649 3644**

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**MAFKI**

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**41 MAFA**

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**After printing this label**:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 09/29/2018 09:00:00 AM

**Work Order #:** 600814

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : R8**

| Sample Receipt Checklist | Comments |
|---|---|
| #1 *Temperature of cooler(s)? | .2 |
| #2 *Shipping container in good condition? | **Yes** |
| #3 *Samples received on ice? | **Yes** |
| #4 *Custody Seals intact on shipping container/ cooler? | **N/A** |
| #5 Custody Seals intact on sample bottles? | **N/A** |
| #6*Custody Seals Signed and dated? | **N/A** |
| #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)? | **N/A** |
| #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:** Brianna Teel Date: 10/01/2018
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 10/01/2018
Jessica Kramer

**Photograph 1:** View northeast of produced water tank.

**Photograph 2:** View south of excavation.