

January 3, 2018

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

**RE: Closure Request  
BEU Hackberry 34 Federal Battery #1  
Remediation Permit Number 2RP-5026  
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing excavation and soil sampling activities at the BEU Hackberry 34 Federal Battery #1 (API 30-015-40288) (Site) in Unit A, Section 34, Township 19 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavating and soil sampling activities was to address impacts to soil after produced water and crude oil were released into the unlined earthen containment berm. The release occurred on the in the southwest portion of the well pad in the process equipment area.

On October 5, 2018, a sight glass broke on a separator casing a release of 14 barrels (bbls) of crude oil and 26 bbls of produced water. Vacuum trucks were dispatched and recovered approximately 12 bbls of crude oil and 23 bbls of produced water. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on October 19, 2018, and was assigned Remediation Permit (RP) Number 2RP-5026 (Attachment 1). A second release occurred at the Site on October 5, 2018 and was assigned 2RP-4399. Due to the releases overlapping, soil sampling and excavation activities to address both releases were conducted at the same time. Some of the soil samples presented herein were additionally used to document response and remediation activities for 2RP-5026. Sample nomenclature may not be sequential due to the Site having two release events. The response to 2RP-4399 is reported under a separate cover.

## **BACKGROUND**

The source of the releases is at latitude 32.621783 degrees (°) and longitude -103.851599°. The release occurred after August 14, 2018; therefore, LTE applied 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 153 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 00722 POD 3, located approximately 1.4 miles west



southwest of the Site. Ground surface elevation at the well location is 3,459 feet, which is 13 feet lower in elevation than the Site. The water well has a depth to groundwater of 140 feet and a total depth of 220 feet bgs. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 5,443 feet south southeast 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 a 100-year floodplain or overlying a subsurface mine. Based on these criteria, the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 1,000 mg/kg gasoline range organics (GRO) and diesel range organics (DRO); 2,500 mg/kg total petroleum hydrocarbons (TPH); and 20,000 mg/kg chloride.

### SOIL SAMPLING

On October 16, 2018, an LTE scientist collected six initial soil samples (SS01 and SS06 through SS10) to assess the lateral extent of impacted soil in the release area (Figure 2). Initial soil sample locations were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected at approximately 0.5 feet bgs. The soil samples were screened for volatile aromatic hydrocarbons (VOCs) using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were shipped to Xenco Laboratories (Xenco) in Midland, Texas, at 4 degrees Celsius (°C) under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by EPA Method 8015 Modified, and chloride by EPA Method 300.0.

Laboratory analytical results for the preliminary soil samples SS06 through SS10 were compliant with the NMOCD site-specific remediation action levels for benzene, BTEX, GRO/DRO, TPH, and chloride. Laboratory analytical results for soil sample SS01 indicated concentrations of benzene, BTEX, GRO/DRO, and TPH exceeded the NMOCD remediation action levels. The laboratory analytical results are depicted on Figure 2, summarized in Table 1, and the full laboratory analytical reports are included in Attachment 2.

### DELINEATION ACTIVITIES

On December 14, 2018, LTE personnel returned to the Site to further investigate delineation of vertical and horizontal impacts to soil. A total of 7 boreholes were advanced using a hand auger (BH01 through BH05, BH09, and BH11). One pothole (PH04) was advanced via hydrovacuum (Hydrovac). As with previous sampling, LTE screened soil samples from the boreholes and pothole using a PID and Hach® chloride QuanTab® test strips. Two samples were collected from each





borehole and submitted for laboratory analysis: one from the soil interval exhibiting the highest field screening value for VOCs and one from the bottom of each borehole and pothole. If field screening results were negative for VOCs, soil samples were collected from the top and bottom of the borehole and pothole. The deepest sample was collected from BH09 at 3.5' bgs. Samples were handled and analyzed as previously described.

Laboratory analytical results indicated delineation soil samples were compliant with the NMOCD benzene, BTEX, GRO/DRO, TPH, and chloride remediation action levels. The laboratory analytical results are depicted on Figure 3, summarized in Table 1, and the full laboratory analytical reports are included in Attachment 2.

## EXCAVATION ACTIVITIES

On December 19, 2018, LTE personnel returned to the Site to oversee excavation of impacted soil in the vicinity of initial soil sample SS01. Due to the high density of equipment and pipelines, excavation was conducted using a Hydrovac. The L-shaped excavation measured approximately 400 square feet and was completed to depths ranging from 2 feet to 4 feet bgs, with the southwestern portion of the excavation being the deepest (Figure 4). Approximately 30 cubic yards of impacted soil were removed from the excavation. The impacted soil removed from the excavation was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

Following removal of impacted soil, LTE collected 5-point composite soil samples from the floor and sidewalls of the excavation. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from depths of 2.5 feet and 4 feet bgs respectively. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thorough mixing. Samples were handled and analyzed by Xenco as previously described. Laboratory analytical results indicated final confirmation excavation soil samples were compliant with the NMOCD benzene, BTEX, GRO/DRO, TPH, and chloride remediation action levels. Results are presented in Table 1 and Figure 4 and laboratory reports are included in Attachment 2.

## CONCLUSIONS

Laboratory analytical results from delineation samples and final excavation soil samples indicate that benzene, BTEX, GRO/DRO, TPH, and chloride concentrations are compliant with NMOCD site-specific remediation action levels. XTO requests no further action for release 2RP-5026. An updated NMOCD Form C-141 is included in Attachment 1. Site photographs are located in Attachment 3.





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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Adrian Baker'.

Adrian Baker  
Project Geologist

A handwritten signature in blue ink that reads 'Ashley L. Ager'.

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

cc: Kyle Littrell, XTO  
Shelly Tucker, Bureau of Land Management  
Robert Hamlet, NMOCD

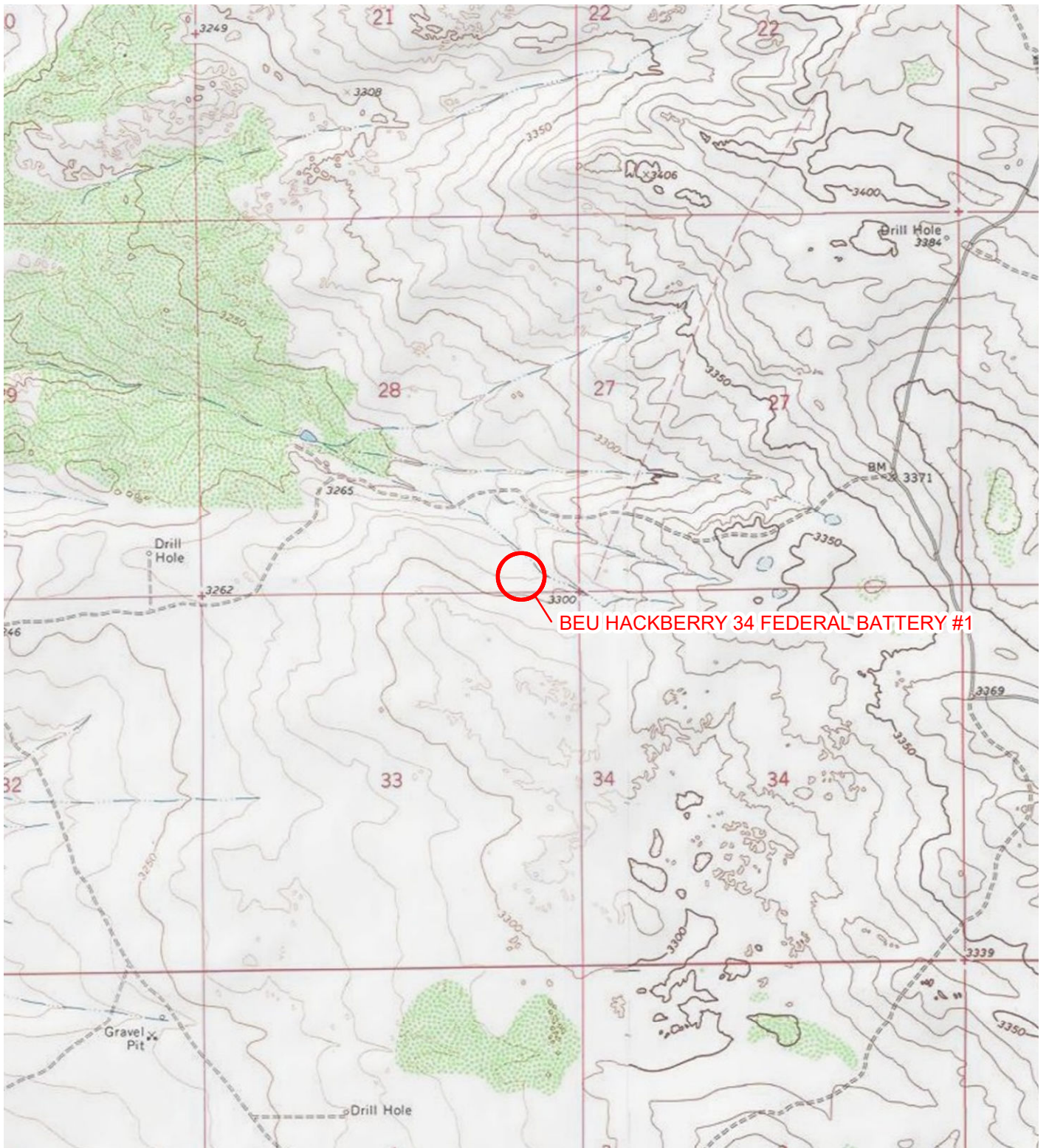
Attachments:

- Figure 1 Site Location Map
- Figure 2 Initial Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Figure 4 Excavation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5026)
- Attachment 2 Laboratory Analytical Reports
- Attachment 3 Photographic Log





## FIGURES

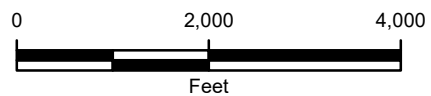


BEU HACKBERRY 34 FEDERAL BATTERY #1

**LEGEND**

 SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

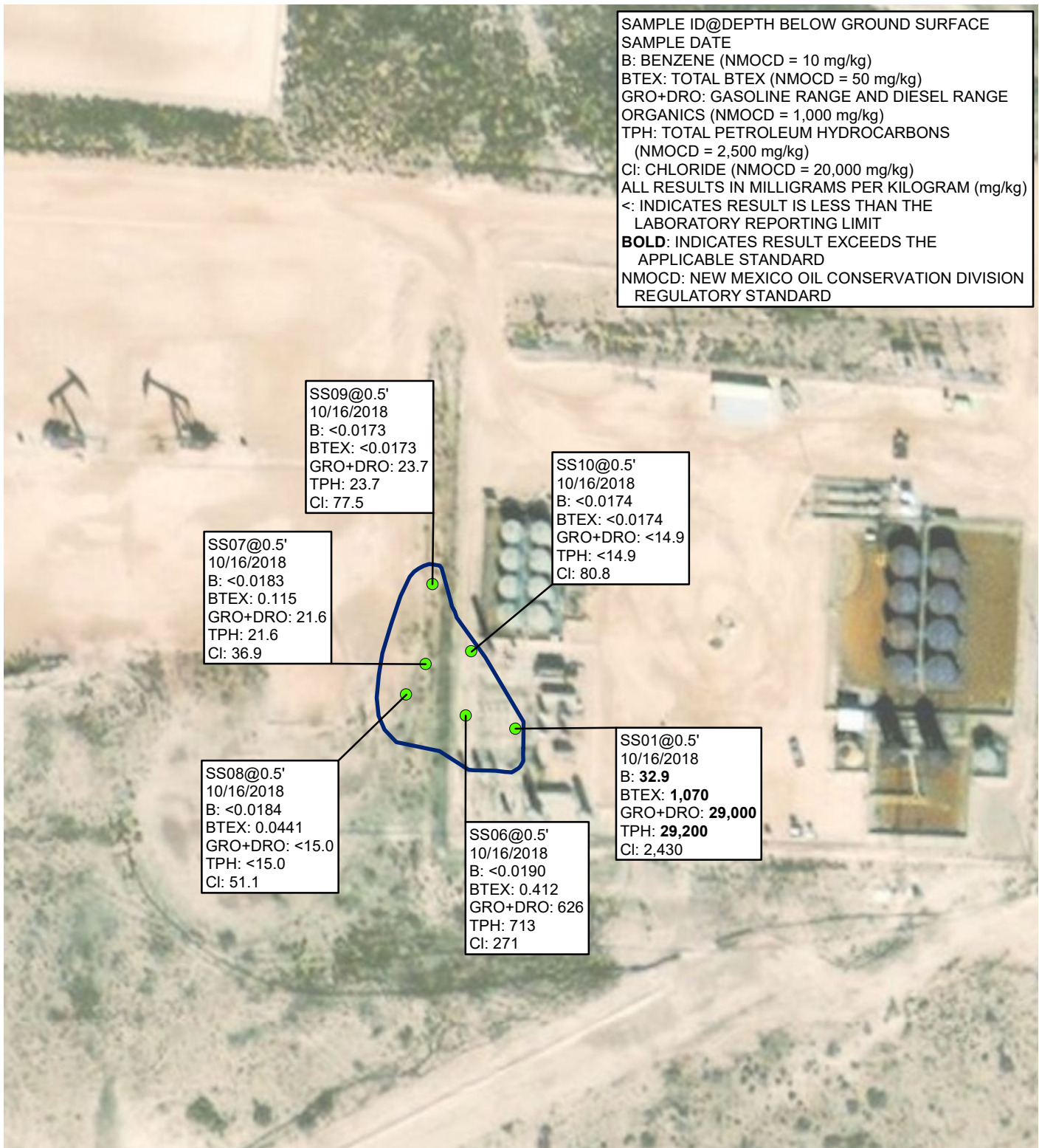


NOTE: REMEDIATION PERMIT NUMBERS 2RP-5026

**FIGURE 1**  
**SITE LOCATION MAP**  
 BEU HACKBERRY 34 FEDERAL BATTERY #1  
 UNIT A SEC 34 T19S R31E  
 EDDY COUNTY, NEW MEXICO  
 XTO ENERGY, INC.



SAMPLE ID@DEPTH BELOW GROUND SURFACE  
 SAMPLE DATE  
 B: BENZENE (NMOCD = 10 mg/kg)  
 BTEX: TOTAL BTEX (NMOCD = 50 mg/kg)  
 GRO+DRO: GASOLINE RANGE AND DIESEL RANGE ORGANICS (NMOCD = 1,000 mg/kg)  
 TPH: TOTAL PETROLEUM HYDROCARBONS (NMOCD = 2,500 mg/kg)  
 Cl: CHLORIDE (NMOCD = 20,000 mg/kg)  
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 <: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT  
**BOLD**: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD  
 NMOCD: NEW MEXICO OIL CONSERVATION DIVISION REGULATORY STANDARD



SS09@0.5'  
 10/16/2018  
 B: <0.0173  
 BTEX: <0.0173  
 GRO+DRO: 23.7  
 TPH: 23.7  
 Cl: 77.5

SS10@0.5'  
 10/16/2018  
 B: <0.0174  
 BTEX: <0.0174  
 GRO+DRO: <14.9  
 TPH: <14.9  
 Cl: 80.8

SS07@0.5'  
 10/16/2018  
 B: <0.0183  
 BTEX: 0.115  
 GRO+DRO: 21.6  
 TPH: 21.6  
 Cl: 36.9

SS01@0.5'  
 10/16/2018  
 B: **32.9**  
 BTEX: **1,070**  
 GRO+DRO: **29,000**  
 TPH: **29,200**  
 Cl: 2,430

SS08@0.5'  
 10/16/2018  
 B: <0.0184  
 BTEX: 0.0441  
 GRO+DRO: <15.0  
 TPH: <15.0  
 Cl: 51.1

SS06@0.5'  
 10/16/2018  
 B: <0.0190  
 BTEX: 0.412  
 GRO+DRO: 626  
 TPH: 713  
 Cl: 271

**LEGEND**

- INITIAL SOIL SAMPLE
- 2RP-5026 RELEASE EXTENT

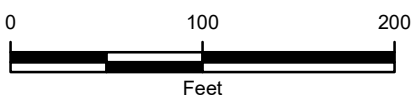


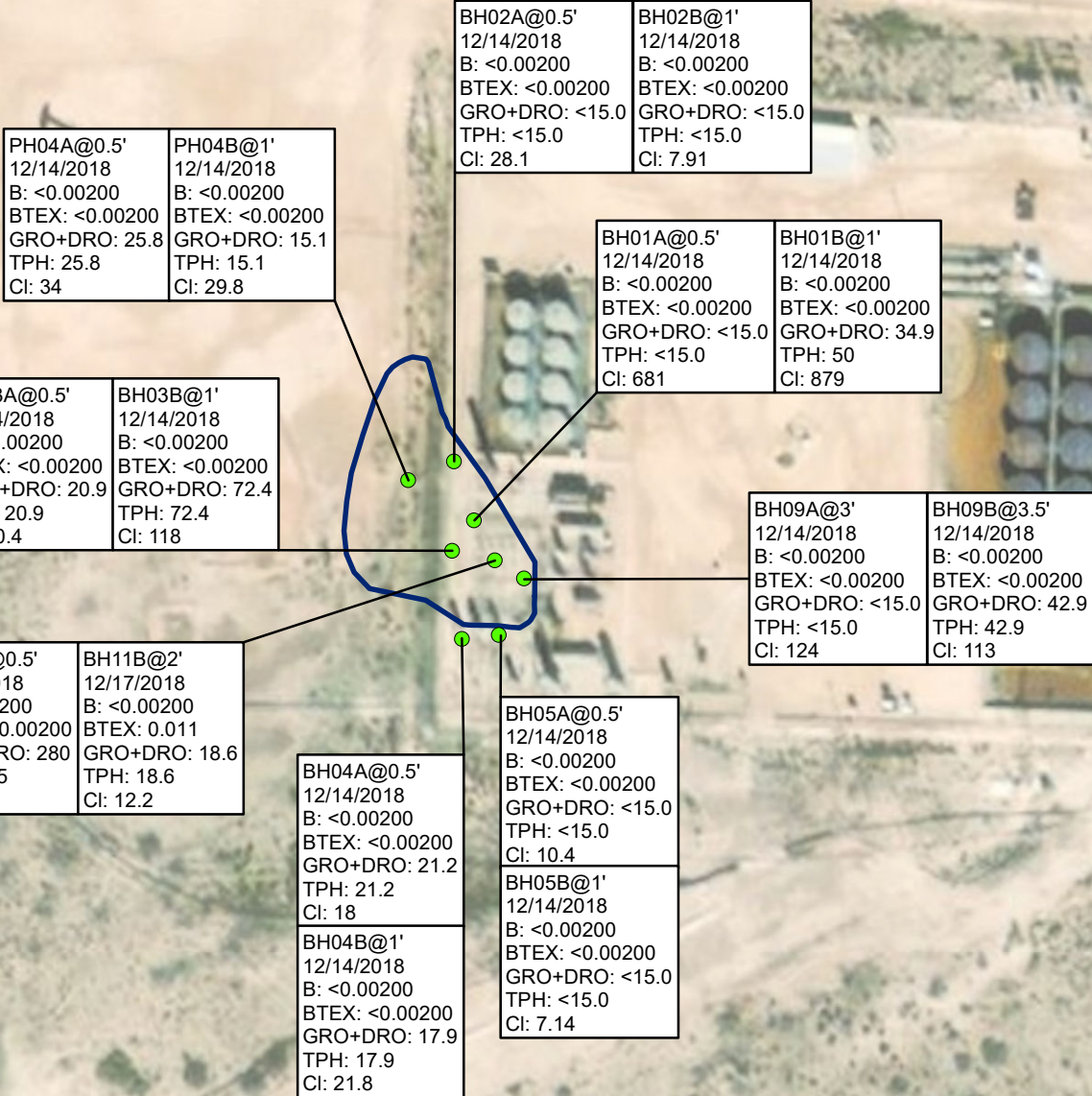
IMAGE COURTESY OF ESRI

**FIGURE 2**  
 INITIAL SOIL SAMPLE LOCATIONS  
 BEU HACKBERRY 34 FEDERAL BATTERY #1  
 UNIT A SEC 34 T19S R31E  
 EDDY COUNTY, NEW MEXICO  
**XTO ENERGY, INC.**



NOTE: REMEDIATION PERMIT NUMBER 2RP-5026

SAMPLE ID@DEPTH BELOW GROUND SURFACE  
 SAMPLE DATE  
 B: BENZENE (NMOCD = 10 mg/kg)  
 BTEX: TOTAL BTEX (NMOCD = 50 mg/kg)  
 GRO+DRO: GASOLINE RANGE AND DIESEL RANGE ORGANICS (NMOCD = 1,000 mg/kg)  
 TPH: TOTAL PETROLEUM HYDROCARBONS (NMOCD = 2,500 mg/kg)  
 Cl: CHLORIDE (NMOCD = 20,000 mg/kg)  
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 &lt;; INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT  
 NMOCD: NEW MEXICO OIL CONSERVATION DIVISION REGULATORY STANDARD



**LEGEND**

- DELINEATION SOIL SAMPLE
- 2RP-5026 RELEASE EXTENT

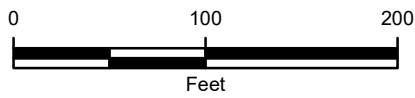


IMAGE COURTESY OF ESRI

**FIGURE 3**  
 DELINEATION SOIL SAMPLE LOCATIONS  
 BEU HACKBERRY 34 FEDERAL BATTERY #1  
 UNIT A SEC 34 T19S R31E  
 EDDY COUNTY, NEW MEXICO  
 XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-5026



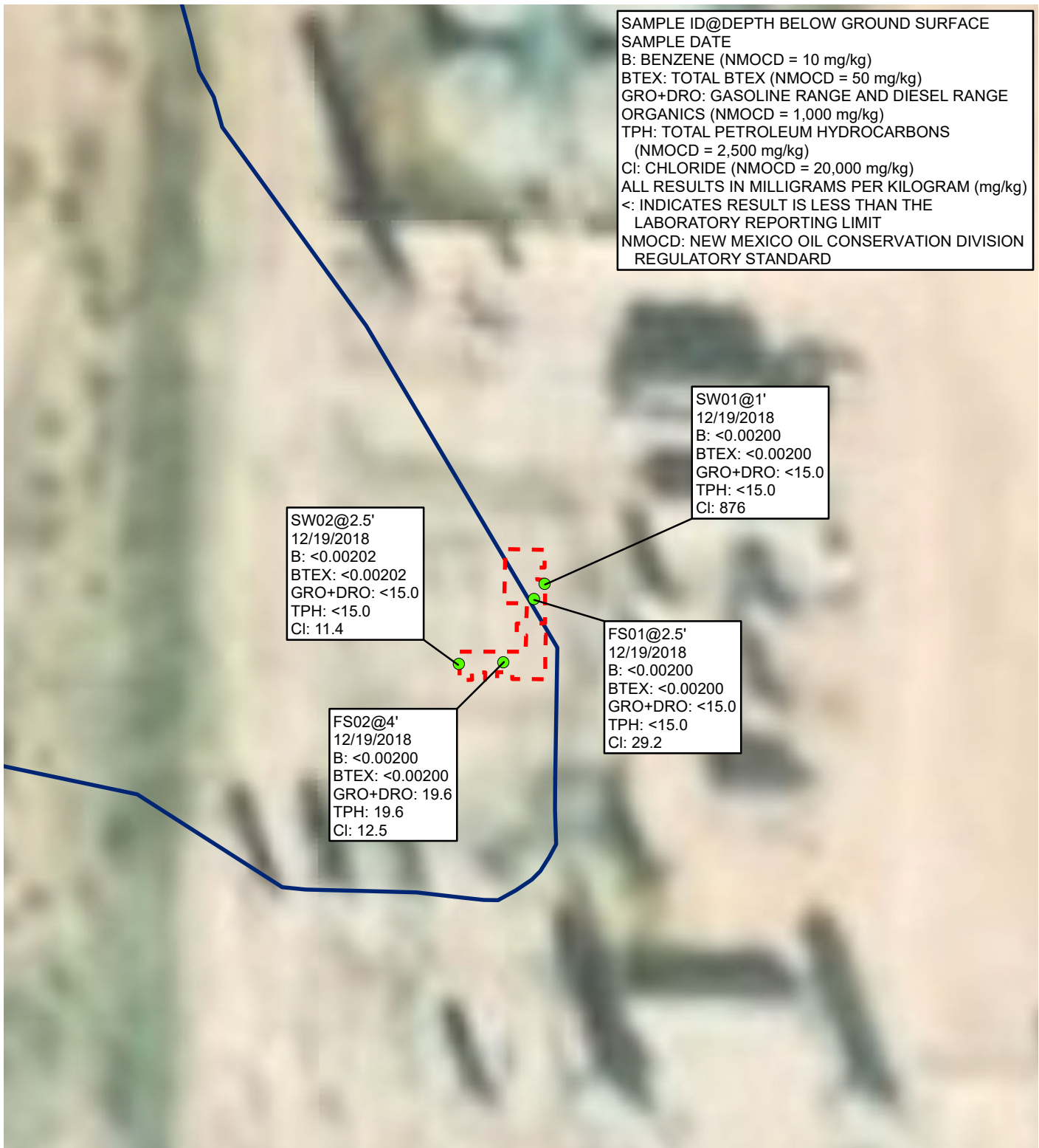
SAMPLE ID@DEPTH BELOW GROUND SURFACE  
 SAMPLE DATE  
 B: BENZENE (NMOCD = 10 mg/kg)  
 BTEX: TOTAL BTEX (NMOCD = 50 mg/kg)  
 GRO+DRO: GASOLINE RANGE AND DIESEL RANGE ORGANICS (NMOCD = 1,000 mg/kg)  
 TPH: TOTAL PETROLEUM HYDROCARBONS (NMOCD = 2,500 mg/kg)  
 Cl: CHLORIDE (NMOCD = 20,000 mg/kg)  
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 <: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT  
 NMOCD: NEW MEXICO OIL CONSERVATION DIVISION REGULATORY STANDARD

SW01@1'  
 12/19/2018  
 B: <0.00200  
 BTEX: <0.00200  
 GRO+DRO: <15.0  
 TPH: <15.0  
 Cl: 876

SW02@2.5'  
 12/19/2018  
 B: <0.00202  
 BTEX: <0.00202  
 GRO+DRO: <15.0  
 TPH: <15.0  
 Cl: 11.4

FS01@2.5'  
 12/19/2018  
 B: <0.00200  
 BTEX: <0.00200  
 GRO+DRO: <15.0  
 TPH: <15.0  
 Cl: 29.2

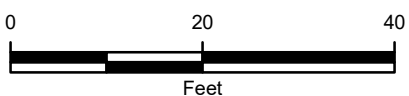
FS02@4'  
 12/19/2018  
 B: <0.00200  
 BTEX: <0.00200  
 GRO+DRO: 19.6  
 TPH: 19.6  
 Cl: 12.5



**LEGEND**

- FINAL CONFIRMATION SOIL SAMPLE
- EXCAVATION EXTENT
- 2RP-5026 RELEASE EXTENT

IMAGE COURTESY OF ESRI



**FIGURE 4**  
 EXCAVATION SOIL SAMPLE LOCATIONS  
 BEU HACKBERRY 34 FEDERAL BATTERY #1  
 UNIT A SEC 34 T19S R31E  
 EDDY COUNTY, NEW MEXICO  
 XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-5026



**TABLE 1  
SOIL ANALYTICAL RESULTS**

**BEU HACKBERRY 34 FEDERAL BATTERY #1  
REMEDIATION PERMIT NUMBER 2RP-5026  
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)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/16/2018	<b>32.9</b>	350	248	439	<b>1,070</b>	8,660	20,300	197	<b>29,000</b>	<b>29,200</b>	2,430
SS06	0.5	10/16/2018	<0.0190	0.0304	0.120	0.262	0.412	<15.0	626	86.9	626	713	271
SS07	0.5	10/16/2018	<0.0183	<0.0183	<0.0183	0.115	0.115	<15.0	21.6	<15.0	21.6	21.6	36.9
SS08	0.5	10/16/2018	<0.0184	<0.0184	0.0441	<0.0184	0.0441	<15.0	<15.0	<15.0	<15.0	<15.0	51.1
SS09	0.5	10/16/2018	<0.0173	<0.0173	<0.0173	<0.0173	<0.0173	<15.0	23.7	<15.0	23.7	23.7	77.5
SS10	0.5	10/16/2018	<0.0174	<0.0174	<0.0174	<0.0174	<0.0174	<14.9	<14.9	<14.9	<14.9	<14.9	80.8
BH01A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	681
BH01B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	34.9	15.1	34.9	50.0	879
BH02A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	28.1
BH02B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.91
BH03A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	20.9	<14.9	20.9	20.9	80.4
BH03B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	72.4	<14.9	72.4	72.4	118
BH04A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	21.2	<15.0	21.2	21.2	18.0
BH04B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	17.9	<15.0	17.9	17.9	21.8
BH05A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.4
BH05B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.14
BH09A	3	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	124
BH09B	3.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	42.9	<15.0	42.9	42.9	113
PH04A	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	25.8	<14.9	25.8	25.8	34.0
PH04B	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	15.1	<15.0	15.1	15.1	29.8
BH11A	0.5	12/17/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	280	55.3	280	335	34.6
BH11B	2	12/17/2018	<0.00200	0.00738	0.00361	<0.00200	0.0110	<15.0	18.6	<15.0	18.6	18.6	12.2
FS01	2.5	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	29.2
FS02	4	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	19.6	<15.0	19.6	19.6	12.5
SW01	1	12/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	876
SW02	2.5	12/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	11.4

NMOC Remediation Action Levels	10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
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**Notes:**  
bgs - below ground surface  
BTEX - benzene, toluene, ethylbenzene, and total xylenes  
mg/kg - milligrams per kilogram  
NE - not established

NMOC - New Mexico Oil Conservation Division  
DRO - diesel range organics  
GRO - gasoline range organics  
ORO - oil range organics

TPH - total petroleum hydrocarbons  
< - indicates result is below laboratory reporting limits  
**Bold** - indicates result exceeds the applicable regulatory standard





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

State of New Mexico  
Energy Minerals and Natural  
Resources Department

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

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

Incident ID	NMAP1829837341
District RP	2RP-5026
Facility ID	N/A
Application ID	pMAP1829836843

## Release Notification

### Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NMAP1829837341
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

### Location of Release Source

Latitude 32.621783 \_\_\_\_\_ Longitude -103.851599 \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hackberry 34 Battery	Site Type Tank Battery
Date Release 10/5/2018	API# 30-015-40288

Unit Letter	Section	Township	Range	County
A	34	19S	31E	Eddy

Surface Owner:  State  Federal  Tribal  Private (Name: *Federal* \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 14	Volume Recovered (bbls) 12
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 26	Volume Recovered (bbls) 23
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

#### Cause of Release



Sight glass broke on separator, causing release of fluid. Vacuum trucks dispatched, recovered 35bbl total fluid with approximately 5 bbl left in the soil.

Incident ID	NMAP1829837341
District RP	2RP-5026
Facility ID	N/A
Application ID	pMAP1829836843

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume, excluding gases, of 25 barrels or more.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notification was provided by Amy Ruth to Maria Pruett/Mike Bratcher/Jim Griswold (NMOCD) and Shelly Tucker/Jim Amos (BLM) on 10/5/2018 by email.	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:  
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Kyle Littrell</u> Title: <u>SH&amp;E Coordinator</u> Signature:  Date: <u>10-19-18</u> email: <u>Kyle.Littrell@xtoenergy.com</u> Telephone: <u>432-221-7331</u>
<b>OCD Only</b> Received by:  Date: <u>10/25/18</u>

Incident ID	NMAP1829837341
District RP	2RP-5026
Facility ID	N/A
Application ID	pMAP1829836843

## Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature:  Date: 10-19-18

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_



Incident ID	
District RP	
Facility ID	
Application ID	

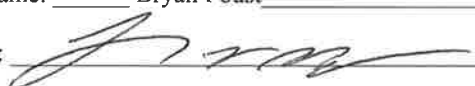
## Closure

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:       Bryan Foust       Title:       SH&E Coordinator        
 Signature:  Date:       1/3/2019        
 email:       Bryan\_Foust@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: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



# Analytical Report 602719

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**BEU Hackberry 34 Battery**

**23-OCT-18**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), 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 (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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)



23-OCT-18

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

Reference: XENCO Report No(s): **602719**  
**BEU Hackberry 34 Battery**  
Project Address: Eddy County

**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) 602719. 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. 602719 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,

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**Jessica Kramer**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



# Sample Cross Reference 602719



## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS06	S	10-16-18 11:08	6 In	602719-001
SS07	S	10-16-18 11:25	6 In	602719-002
SS08	S	10-16-18 11:28	6 In	602719-003
SS09	S	10-16-18 11:35	6 In	602719-004
SS10	S	10-16-18 11:55	6 In	602719-005



## CASE NARRATIVE

*Client Name: LT Environmental, Inc.*

*Project Name: BEU Hackberry 34 Battery*

Project ID:  
Work Order Number(s): 602719

Report Date: 23-OCT-18  
Date Received: 10/18/2018

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3067038 BTEX by EPA 8021B

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

Batch: LBA-3067041 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 602719



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:**  
**Contact:** Adrian Baker  
**Project Location:** Eddy County

**Date Received in Lab:** Thu Oct-18-18 10:40 am  
**Report Date:** 23-OCT-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602719-001	602719-002	602719-003	602719-004	602719-005	
	<i>Field Id:</i>	SS06	SS07	SS08	SS09	SS10	
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Oct-16-18 11:08	Oct-16-18 11:25	Oct-16-18 11:28	Oct-16-18 11:35	Oct-16-18 11:55	
<b>BTEX by EPA 8021B SUB: T104704219-18-18</b>	<i>Extracted:</i>	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	
	<i>Analyzed:</i>	Oct-21-18 04:18	Oct-21-18 04:42	Oct-21-18 05:06	Oct-21-18 09:53	Oct-21-18 10:17	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
	Benzene	<0.0190 0.0190	<0.0183 0.0183	<0.0184 0.0184	<0.0173 0.0173	<0.0174 0.0174	
	Toluene	0.0304 0.0190	<0.0183 0.0183	<0.0184 0.0184	<0.0173 0.0173	<0.0174 0.0174	
	Ethylbenzene	0.120 0.0190	<0.0183 0.0183	0.0441 0.0184	<0.0173 0.0173	<0.0174 0.0174	
	m,p-Xylenes	0.146 0.0380	0.115 0.0366	<0.0368 0.0368	<0.0345 0.0345	<0.0347 0.0347	
	o-Xylene	0.116 0.0190	<0.0183 0.0183	<0.0184 0.0184	<0.0173 0.0173	<0.0174 0.0174	
Total Xylenes	0.262 0.0190	0.115 0.0183	<0.0184 0.0184	<0.0173 0.0173	<0.0174 0.0174		
Total BTEX	0.412 0.0190	0.115 0.0183	0.0441 0.0184	<0.0173 0.0173	<0.0174 0.0174		
<b>Inorganic Anions by EPA 300 SUB: T104704219-18-18</b>	<i>Extracted:</i>	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	
	<i>Analyzed:</i>	Oct-19-18 20:14	Oct-19-18 20:26	Oct-19-18 21:04	Oct-19-18 21:16	Oct-19-18 21:29	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride	271 125	36.9 25.0	51.1 25.0	77.5 25.0	80.8 25.0		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Oct-19-18 17:00	Oct-19-18 17:00	Oct-19-18 17:00	Oct-19-18 17:00	Oct-19-18 17:00	
	<i>Analyzed:</i>	Oct-20-18 14:20	Oct-22-18 08:00	Oct-20-18 14:57	Oct-20-18 15:16	Oct-20-18 15:34	
	<i>Units/RL:</i>	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	<14.9 14.9	
	Diesel Range Organics (DRO)	626 15.0	21.6 15.0	<15.0 15.0	23.7 15.0	<14.9 14.9	
Motor Oil Range Hydrocarbons (MRO)	86.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Total TPH	713 15.0	21.6 15.0	<15.0 15.0	23.7 15.0	<14.9 14.9		

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

*Jessica Kramer*

Jessica Kramer  
Project Assistant

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS06</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-001	Date Collected: 10.16.18 11.08	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: RNL		% Moisture:
Analyst: RNL	Date Prep: 10.19.18 11.00	Basis: Wet Weight
Seq Number: 3067028		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	271	125	mg/kg	10.19.18 20.14		5

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 10.19.18 17.00
Seq Number: 3067097	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.20.18 14.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	626	15.0	mg/kg	10.20.18 14.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	86.9	15.0	mg/kg	10.20.18 14.20		1
<b>Total TPH</b>	PHC635	<b>713</b>	15.0	mg/kg	10.20.18 14.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.20.18 14.20	
o-Terphenyl	84-15-1	116	%	70-135	10.20.18 14.20	



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **SS06**  
 Lab Sample Id: 602719-001

Matrix: Soil  
 Date Collected: 10.16.18 11.08

Date Received: 10.18.18 10.40  
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067038

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0190	0.0190	mg/kg	10.21.18 04.18	U	1
<b>Toluene</b>	108-88-3	<b>0.0304</b>	0.0190	mg/kg	10.21.18 04.18		1
<b>Ethylbenzene</b>	100-41-4	<b>0.120</b>	0.0190	mg/kg	10.21.18 04.18		1
<b>m,p-Xylenes</b>	179601-23-1	<b>0.146</b>	0.0380	mg/kg	10.21.18 04.18		1
<b>o-Xylene</b>	95-47-6	<b>0.116</b>	0.0190	mg/kg	10.21.18 04.18		1
<b>Total Xylenes</b>	1330-20-7	<b>0.262</b>	0.0190	mg/kg	10.21.18 04.18		1
<b>Total BTEX</b>		<b>0.412</b>	0.0190	mg/kg	10.21.18 04.18		1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	113	%	68-120	10.21.18 04.18		
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	10.21.18 04.18		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS07</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-002	Date Collected: 10.16.18 11.25	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: RNL		% Moisture:
Analyst: RNL	Date Prep: 10.19.18 11.00	Basis: Wet Weight
Seq Number: 3067028		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.9	25.0	mg/kg	10.19.18 20.26		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 10.19.18 17.00
Seq Number: 3067097	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 08.00	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>21.6</b>	15.0	mg/kg	10.22.18 08.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 08.00	U	1
<b>Total TPH</b>	PHC635	<b>21.6</b>	15.0	mg/kg	10.22.18 08.00		1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	100	%	70-135	10.22.18 08.00		
o-Terphenyl	84-15-1	103	%	70-135	10.22.18 08.00		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS07</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-002	Date Collected: 10.16.18 11.25	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MIT		% Moisture:
Analyst: MIT	Date Prep: 10.19.18 12.30	Basis: Wet Weight
Seq Number: 3067038		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0183	0.0183	mg/kg	10.21.18 04.42	U	1
Toluene	108-88-3	<0.0183	0.0183	mg/kg	10.21.18 04.42	U	1
Ethylbenzene	100-41-4	<0.0183	0.0183	mg/kg	10.21.18 04.42	U	1
<b>m,p-Xylenes</b>	179601-23-1	<b>0.115</b>	0.0366	mg/kg	10.21.18 04.42		1
o-Xylene	95-47-6	<0.0183	0.0183	mg/kg	10.21.18 04.42	U	1
<b>Total Xylenes</b>	1330-20-7	<b>0.115</b>	0.0183	mg/kg	10.21.18 04.42		1
<b>Total BTEX</b>		<b>0.115</b>	0.0183	mg/kg	10.21.18 04.42		1
		%					
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	106	%	68-120	10.21.18 04.42		
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	10.21.18 04.42		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS08</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-003	Date Collected: 10.16.18 11.28	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: RNL		% Moisture:
Analyst: RNL	Date Prep: 10.19.18 11.00	Basis: Wet Weight
Seq Number: 3067028		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	51.1	25.0	mg/kg	10.19.18 21.04		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 10.19.18 17.00
Seq Number: 3067097	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.20.18 14.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.20.18 14.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.20.18 14.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.20.18 14.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.20.18 14.57	
o-Terphenyl	84-15-1	97	%	70-135	10.20.18 14.57	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS08</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-003	Date Collected: 10.16.18 11.28	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MIT		% Moisture:
Analyst: MIT	Date Prep: 10.19.18 12.30	Basis: Wet Weight
Seq Number: 3067038		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0184	0.0184	mg/kg	10.21.18 05.06	U	1
Toluene	108-88-3	<0.0184	0.0184	mg/kg	10.21.18 05.06	U	1
<b>Ethylbenzene</b>	100-41-4	<b>0.0441</b>	0.0184	mg/kg	10.21.18 05.06		1
m,p-Xylenes	179601-23-1	<0.0368	0.0368	mg/kg	10.21.18 05.06	U	1
o-Xylene	95-47-6	<0.0184	0.0184	mg/kg	10.21.18 05.06	U	1
Total Xylenes	1330-20-7	<0.0184	0.0184	mg/kg	10.21.18 05.06	U	1
<b>Total BTEX</b>		<b>0.0441</b>	0.0184	mg/kg	10.21.18 05.06		1
		%					
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	110	%	68-120	10.21.18 05.06		
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	10.21.18 05.06		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS09</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-004	Date Collected: 10.16.18 11.35	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: RNL		% Moisture:
Analyst: RNL	Date Prep: 10.19.18 11.00	Basis: Wet Weight
Seq Number: 3067028		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	77.5	25.0	mg/kg	10.19.18 21.16		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 10.19.18 17.00
Seq Number: 3067097	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.20.18 15.16	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>23.7</b>	15.0	mg/kg	10.20.18 15.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.20.18 15.16	U	1
<b>Total TPH</b>	PHC635	<b>23.7</b>	15.0	mg/kg	10.20.18 15.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.20.18 15.16	
o-Terphenyl	84-15-1	102	%	70-135	10.20.18 15.16	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS09</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-004	Date Collected: 10.16.18 11.35	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MIT		% Moisture:
Analyst: MIT	Date Prep: 10.19.18 12.30	Basis: Wet Weight
Seq Number: 3067041		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
Toluene	108-88-3	<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
Ethylbenzene	100-41-4	<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
m,p-Xylenes	179601-23-1	<0.0345	0.0345	mg/kg	10.21.18 09.53	U	1
o-Xylene	95-47-6	<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
Total Xylenes	1330-20-7	<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
Total BTEX		<0.0173	0.0173	mg/kg	10.21.18 09.53	U	1
		%					
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	94	%	68-120	10.21.18 09.53		
a,a,a-Trifluorotoluene	98-08-8	94	%	71-121	10.21.18 09.53		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SS10</b>	Matrix: Soil	Date Received: 10.18.18 10.40
Lab Sample Id: 602719-005	Date Collected: 10.16.18 11.55	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: RNL		% Moisture:
Analyst: RNL	Date Prep: 10.19.18 11.00	Basis: Wet Weight
Seq Number: 3067028		SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>80.8</b>	25.0	mg/kg	10.19.18 21.29		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 10.19.18 17.00
Seq Number: 3067097	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.20.18 15.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.20.18 15.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.20.18 15.34	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.20.18 15.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.20.18 15.34	
o-Terphenyl	84-15-1	100	%	70-135	10.20.18 15.34	



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **SS10**  
 Lab Sample Id: 602719-005

Matrix: Soil  
 Date Collected: 10.16.18 11.55

Date Received: 10.18.18 10.40  
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
Toluene	108-88-3	<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
Ethylbenzene	100-41-4	<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
m,p-Xylenes	179601-23-1	<0.0347	0.0347	mg/kg	10.21.18 10.17	U	1
o-Xylene	95-47-6	<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
Total Xylenes	1330-20-7	<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
Total BTEX		<0.0174	0.0174	mg/kg	10.21.18 10.17	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	86		%	68-120	10.21.18 10.17	
a,a,a-Trifluorotoluene	98-08-8	89		%	71-121	10.21.18 10.17	





# QC Summary 602719

**LT Environmental, Inc.**  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3067028 Matrix: Solid Prep Method: E300P  
 MB Sample Id: 7664554-1-BLK LCS Sample Id: 7664554-1-BKS Date Prep: 10.19.18  
 LCSD Sample Id: 7664554-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.26	250	246	98	239	96	90-110	3	20	mg/kg	10.19.18 16:43	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3067028 Matrix: Soil Prep Method: E300P  
 Parent Sample Id: 602716-012 MS Sample Id: 602716-012 S Date Prep: 10.19.18  
 MSD Sample Id: 602716-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	383	250	628	98	648	106	80-120	3	20	mg/kg	10.19.18 17:33	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3067028 Matrix: Soil Prep Method: E300P  
 Parent Sample Id: 602719-002 MS Sample Id: 602719-002 S Date Prep: 10.19.18  
 MSD Sample Id: 602719-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.9	250	277	96	275	95	80-120	1	20	mg/kg	10.19.18 20:39	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3067097 Matrix: Solid Prep Method: TX1005P  
 MB Sample Id: 7664525-1-BLK LCS Sample Id: 7664525-1-BKS Date Prep: 10.19.18  
 LCSD Sample Id: 7664525-1-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	852	85	882	88	70-135	3	20	mg/kg	10.20.18 12:47	
Diesel Range Organics (DRO)	<8.13	1000	980	98	1020	102	70-135	4	20	mg/kg	10.20.18 12:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		124		126		70-135	%	10.20.18 12:47
o-Terphenyl	97		122		124		70-135	%	10.20.18 12:47

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067038

MB Sample Id: 7664511-1-BLK

Matrix: Solid

LCS Sample Id: 7664511-1-BKS

Prep Method: SW5030B

Date Prep: 10.19.18

LCSD Sample Id: 7664511-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.87	94	1.81	91	55-120	3	20	mg/kg	10.20.18 17:50	
Toluene	<0.0200	2.00	1.83	92	1.77	89	77-120	3	20	mg/kg	10.20.18 17:50	
Ethylbenzene	<0.0200	2.00	2.00	100	1.86	93	77-120	7	20	mg/kg	10.20.18 17:50	
m,p-Xylenes	<0.0400	4.00	3.95	99	3.67	92	78-120	7	20	mg/kg	10.20.18 17:50	
o-Xylene	<0.0200	2.00	1.94	97	1.84	92	78-120	5	20	mg/kg	10.20.18 17:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		86		92		68-120	%	10.20.18 17:50
a,a,a-Trifluorotoluene	104		81		94		71-121	%	10.20.18 17:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067041

MB Sample Id: 7664512-1-BLK

Matrix: Solid

LCS Sample Id: 7664512-1-BKS

Prep Method: SW5030B

Date Prep: 10.19.18

LCSD Sample Id: 7664512-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.80	90	1.82	91	55-120	1	20	mg/kg	10.21.18 06:41	
Toluene	<0.0200	2.00	1.76	88	1.78	89	77-120	1	20	mg/kg	10.21.18 06:41	
Ethylbenzene	<0.0200	2.00	1.83	92	1.85	93	77-120	1	20	mg/kg	10.21.18 06:41	
m,p-Xylenes	<0.0400	4.00	3.66	92	3.70	93	78-120	1	20	mg/kg	10.21.18 06:41	
o-Xylene	<0.0200	2.00	1.85	93	1.87	94	78-120	1	20	mg/kg	10.21.18 06:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	76		86		84		68-120	%	10.21.18 06:41
a,a,a-Trifluorotoluene	75		89		85		71-121	%	10.21.18 06:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067038

Parent Sample Id: 602716-001

Matrix: Soil

MS Sample Id: 602716-001 S

Prep Method: SW5030B

Date Prep: 10.19.18

MSD Sample Id: 602716-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0197	1.97	1.69	86	1.66	85	54-120	2	25	mg/kg	10.20.18 19:50	
Toluene	<0.0197	1.97	1.70	86	1.68	86	57-120	1	25	mg/kg	10.20.18 19:50	
Ethylbenzene	<0.0197	1.97	1.80	91	1.87	95	58-131	4	25	mg/kg	10.20.18 19:50	
m,p-Xylenes	<0.0394	3.94	3.58	91	3.77	96	62-124	5	25	mg/kg	10.20.18 19:50	
o-Xylene	<0.0197	1.97	1.77	90	1.85	94	62-124	4	25	mg/kg	10.20.18 19:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		98		68-120	%	10.20.18 19:50
a,a,a-Trifluorotoluene	90		93		71-121	%	10.20.18 19:50

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: BTEX by EPA 8021B  
Seq Number: 3067041  
Parent Sample Id: 602722-009

Matrix: Soil  
MS Sample Id: 602722-009 S  
Prep Method: SW5030B  
Date Prep: 10.19.18  
MSD Sample Id: 602722-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0191	1.91	1.64	86	1.48	83	54-120	10	25	mg/kg	10.21.18 08:41	
Toluene	<0.0191	1.91	1.75	92	1.50	84	57-120	15	25	mg/kg	10.21.18 08:41	
Ethylbenzene	<0.0191	1.91	1.92	101	1.58	89	58-131	19	25	mg/kg	10.21.18 08:41	
m,p-Xylenes	<0.0382	3.82	3.83	100	3.16	89	62-124	19	25	mg/kg	10.21.18 08:41	
o-Xylene	<0.0191	1.91	1.86	97	1.57	88	62-124	17	25	mg/kg	10.21.18 08:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	113		89		68-120	%	10.21.18 08:41
a,a,a-Trifluorotoluene	109		91		71-121	%	10.21.18 08:41

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



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Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: <u>IT Environmental, Inc</u> <u>Perkins Office</u>		Project Name/Number: <u>BEU Hackberry 34 Battery</u>		Xenoco Quote # <u>1002719</u>		Xenoco Job # <u>1002719</u>									
Company Address: <u>3300 W 14th St. Building Unit 103</u> <u>Midland, TX 79702</u>		Project Location: <u>Eddy County</u>		Xenoco Job #		Matrix Codes									
Email: <u>ababero@itenv.com</u> <u>(432) 704-5178</u>		Invoice To: <u>XTD: Kyle Littrell</u>		Xenoco Job #		Matrix Codes									
Project Contact: <u>Adrian Baker</u>		PO Number:		Xenoco Job #		Matrix Codes									
Samplers Name: <u>Anna Byers</u>		Field ID / Point of Collection:		Xenoco Job #		Matrix Codes									
No.	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments	
1	SSDB	10/16	11:08	S	1									TPH by SW8015 Mod	
2	SSDB	10/16	11:25	S	1									BTEX by EPA 8021B	
3	SSDB	10/16	11:28	S	1									Chloride by EPA 300	
4	SSDB	10/16	11:35	S	1										
5	SS10	10/16	11:55	S	1										
6															
7															
8															
9															
10															
Turnaround Time (Business days)		Data Deliverable Information		Notes:											
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std OC		<input type="checkbox"/> Level IV (Full Data Pkg raw data)									
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std OC+ Forms		<input type="checkbox"/> TRRP Level IV									
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411									
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> TRRP Checklist													
TAT Starts Day received by Lab, if received by 5:00 pm		FED-EX / UPS: Tracking # <u>773508944438</u>													
Relinquished by Sampler: <u>Anna Byers</u>		Date Time: <u>10/17/18</u>		Received By: <u>1. Kimberly P. Eddy</u>		Date Time: <u>10/17/18</u>		Received By: <u>2. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>3. [Signature]</u>		Date Time: <u>10/17/18</u>	
Relinquished by: <u>Anna Byers</u>		Date Time: <u>10/17/18</u>		Received By: <u>3. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>4. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>5. [Signature]</u>		Date Time: <u>10/17/18</u>	
Relinquished by: <u>Anna Byers</u>		Date Time: <u>10/17/18</u>		Received By: <u>4. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>5. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>6. [Signature]</u>		Date Time: <u>10/17/18</u>	
Relinquished by: <u>Anna Byers</u>		Date Time: <u>10/17/18</u>		Received By: <u>5. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>6. [Signature]</u>		Date Time: <u>10/17/18</u>		Received By: <u>7. [Signature]</u>		Date Time: <u>10/17/18</u>	

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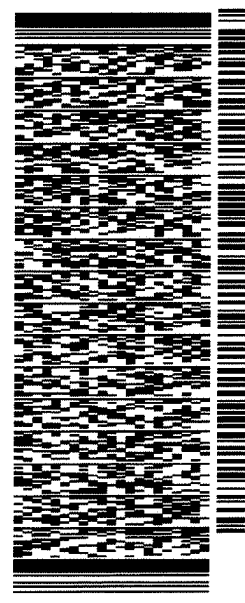
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INV  
PO

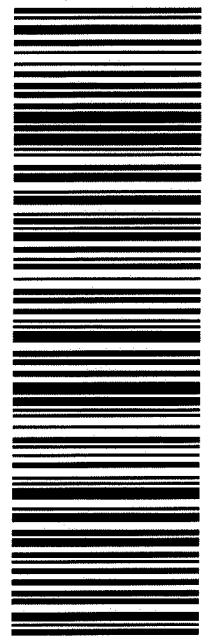
DEPT:

552J188FB/DCA5



THU - 18 OCT HOLD  
STANDARD OVERNIGHT  
HLD  
TRK# 7735 0392 4628  
0201

41 MAFA  
TX-US  
MAFA  
LBB



**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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# Inter-Office Shipment

**IOS Number 115727**

Date/Time: 10/18/18 11:37

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Lubbock**

Air Bill No.: 773515268264

F-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
602719-001	S	SS06	10/16/18 11:08	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602719-001	S	SS06	10/16/18 11:08	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602719-002	S	SS07	10/16/18 11:25	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602719-002	S	SS07	10/16/18 11:25	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602719-003	S	SS08	10/16/18 11:28	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602719-003	S	SS08	10/16/18 11:28	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602719-004	S	SS09	10/16/18 11:35	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602719-004	S	SS09	10/16/18 11:35	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	
602719-005	S	SS10	10/16/18 11:55	SW8021B	BTEX by EPA 8021B	10/24/18	10/30/18	JKR	BR4FBZ BZ BZME EBZ X	
602719-005	S	SS10	10/16/18 11:55	E300	Inorganic Anions by EPA 300	10/24/18	11/13/18	JKR	CL	

**Inter Office Shipment or Sample Comments:**

Relinquished By: *Brianna Teel*  
Brianna Teel

Date Relinquished: 10/18/2018

Received By: *Brenda Ward*  
Brenda Ward

Date Received: 10/19/2018 10:44

Cooler Temperature: 2.9





# XENCO Laboratories



## Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 115727

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-3

Sent By: Brianna Teel

Date Sent: 10/18/2018 11:37 AM

Received By: Brenda Ward

Date Received: 10/19/2018 10:44 AM

### Sample Receipt Checklist

### Comments

#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	Yes	0
#3 *Samples received with appropriate temperature?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 *Custody Seals Signed and dated for Containers/coolers	Yes	
#6 *IOS present?	No	
#7 Any missing/extra samples?	No	
#8 IOS agrees with sample label(s)/matrix?	Yes	
#9 Sample matrix/ properties agree with IOS?	Yes	
#10 Samples in proper container/ bottle?	Yes	
#11 Samples properly preserved?	Yes	
#12 Sample container(s) intact?	Yes	
#13 Sufficient sample amount for indicated test(s)?	Yes	
#14 All samples received within hold time?	Yes	

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

NonConformance:

Corrective Action Taken:

### Nonconformance Documentation

Contact: \_\_\_\_\_ Contacted by : \_\_\_\_\_ Date: \_\_\_\_\_

Checklist reviewed by:

Brenda Ward  
Brenda Ward

Date: 10/19/2018



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



**Client:** LT Environmental, Inc.

**Date/ Time Received:** 10/18/2018 10:40:00 AM

**Work Order #:** 602719

**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?	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)?	Yes	Lubbock-BTEX/Chlorides
#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: 10/18/2018  
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 10/18/2018  
Jessica Kramer

# Analytical Report 608832

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**BEU Hackberry 34 Battery**

**20-DEC-18**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), 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 (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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)



20-DEC-18

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

Reference: XENCO Report No(s): **608832**  
**BEU Hackberry 34 Battery**  
Project Address: Eddy County

**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) 608832. 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. 608832 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**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



# Sample Cross Reference 608832



## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01A	S	12-12-18 10:45	.5 ft	608832-001
PH01B	S	12-13-18 10:46	1 ft	608832-002
PH02A	S	12-13-18 10:15	.5 ft	608832-003
PH02B	S	12-13-18 10:20	1 ft	608832-004
PH03A	S	12-13-18 12:15	1 ft	608832-005
PH03B	S	12-13-18 12:20	2 ft	608832-006



## CASE NARRATIVE

*Client Name: LT Environmental, Inc.*

*Project Name: BEU Hackberry 34 Battery*

Project ID:  
Work Order Number(s): 608832

Report Date: 20-DEC-18  
Date Received: 12/15/2018

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3073325 BTEX by EPA 8021B

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

Batch: LBA-3073331 BTEX by EPA 8021B

Lab Sample ID 608832-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene recovered below QC limits in the Matrix Spike. Benzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 608832-003, -004, -005, -006.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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



# Certificate of Analysis Summary 608832



**LT Environmental, Inc., Arvada, CO**

**Project Name: BEU Hackberry 34 Battery**

**Project Id:**  
**Contact:** Adrian Baker  
**Project Location:** Eddy County

**Date Received in Lab:** Sat Dec-15-18 09:30 am  
**Report Date:** 20-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	608832-001	608832-002	608832-003	608832-004	608832-005	608832-006
	<i>Field Id:</i>	PH01A	PH01B	PH02A	PH02B	PH03A	PH03B
	<i>Depth:</i>	.5- ft	1- ft	.5- ft	1- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-12-18 10:45	Dec-13-18 10:46	Dec-13-18 10:15	Dec-13-18 10:20	Dec-13-18 12:15	Dec-13-18 12:20
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-18-18 16:00	Dec-18-18 16:00	Dec-18-18 16:30	Dec-18-18 16:30	Dec-18-18 16:30	Dec-18-18 16:30
	<i>Analyzed:</i>	Dec-18-18 20:48	Dec-18-18 21:07	Dec-19-18 05:54	Dec-19-18 06:13	Dec-19-18 06:32	Dec-19-18 06:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00400 0.00400	<0.00401 0.00401	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-17-18 16:00	Dec-17-18 16:00	Dec-17-18 16:00	Dec-17-18 16:00	Dec-17-18 16:00	Dec-17-18 16:00
	<i>Analyzed:</i>	Dec-18-18 02:55	Dec-18-18 03:01	Dec-18-18 03:14	Dec-18-18 03:08	Dec-18-18 03:32	Dec-18-18 03:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		142 5.00	104 5.00	53.1 5.00	70.5 4.95	211 5.00	103 4.95
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-19-18 18:00	Dec-19-18 18:00	Dec-19-18 18:00	Dec-19-18 18:00	Dec-19-18 18:00	Dec-19-18 18:00
	<i>Analyzed:</i>	Dec-19-18 21:59	Dec-19-18 23:00	Dec-19-18 23:21	Dec-19-18 23:42	Dec-20-18 00:03	Dec-20-18 00:24
	<i>Units/RL:</i>	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)		89.1 15.0	152 15.0	18.8 15.0	16.7 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		39.0 15.0	98.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		128 15.0	251 15.0	18.8 15.0	16.7 15.0	<15.0 15.0	<14.9 14.9

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

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

*Jessica Kramer*

Jessica Kramer  
Project Assistant

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH01A</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-001	Date Collected: 12.12.18 10.45	Sample Depth: .5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	5.00	mg/kg	12.18.18 02.55		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.19.18 21.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	89.1	15.0	mg/kg	12.19.18 21.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	39.0	15.0	mg/kg	12.19.18 21.59		1
<b>Total TPH</b>	PHC635	<b>128</b>	15.0	mg/kg	12.19.18 21.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	12.19.18 21.59	
o-Terphenyl	84-15-1	90	%	70-135	12.19.18 21.59	





# Certificate of Analytical Results 608832



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH01A**  
Lab Sample Id: 608832-001

Matrix: Soil  
Date Collected: 12.12.18 10.45

Date Received: 12.15.18 09.30  
Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.18.18 16.00

Basis: Wet Weight

Seq Number: 3073325

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.18.18 20.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.18.18 20.48	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	93		%	70-130	12.18.18 20.48	
1,4-Difluorobenzene	540-36-3	109		%	70-130	12.18.18 20.48	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH01B</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-002	Date Collected: 12.13.18 10.46	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	5.00	mg/kg	12.18.18 03.01		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.19.18 23.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	152	15.0	mg/kg	12.19.18 23.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	98.9	15.0	mg/kg	12.19.18 23.00		1
<b>Total TPH</b>	PHC635	<b>251</b>	15.0	mg/kg	12.19.18 23.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.19.18 23.00	
o-Terphenyl	84-15-1	90	%	70-135	12.19.18 23.00	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH01B**  
 Lab Sample Id: 608832-002

Matrix: Soil  
 Date Collected: 12.13.18 10.46

Date Received: 12.15.18 09.30  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3073325

Date Prep: 12.18.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.18.18 21.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.18.18 21.07	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.18.18 21.07		
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.18.18 21.07		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH02A</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-003	Date Collected: 12.13.18 10.15	Sample Depth: .5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.1	5.00	mg/kg	12.18.18 03.14		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.19.18 23.21	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>18.8</b>	15.0	mg/kg	12.19.18 23.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.19.18 23.21	U	1
<b>Total TPH</b>	PHC635	<b>18.8</b>	15.0	mg/kg	12.19.18 23.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	12.19.18 23.21	
o-Terphenyl	84-15-1	90	%	70-135	12.19.18 23.21	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH02A**  
 Lab Sample Id: 608832-003

Matrix: Soil  
 Date Collected: 12.13.18 10.15

Date Received: 12.15.18 09.30  
 Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.18.18 16.30

Basis: Wet Weight

Seq Number: 3073331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.19.18 05.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 05.54	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	89	%	70-130	12.19.18 05.54		
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.19.18 05.54		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH02B</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-004	Date Collected: 12.13.18 10.20	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	70.5	4.95	mg/kg	12.18.18 03.08		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.19.18 23.42	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>16.7</b>	15.0	mg/kg	12.19.18 23.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.19.18 23.42	U	1
<b>Total TPH</b>	PHC635	<b>16.7</b>	15.0	mg/kg	12.19.18 23.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	12.19.18 23.42	
o-Terphenyl	84-15-1	89	%	70-135	12.19.18 23.42	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH02B**  
 Lab Sample Id: 608832-004

Matrix: Soil  
 Date Collected: 12.13.18 10.20

Date Received: 12.15.18 09.30  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3073331

Date Prep: 12.18.18 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.19.18 06.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 06.13	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.19.18 06.13		
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.19.18 06.13		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH03A</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-005	Date Collected: 12.13.18 12.15	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	211	5.00	mg/kg	12.18.18 03.32		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.20.18 00.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.20.18 00.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.20.18 00.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.20.18 00.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	12.20.18 00.03	
o-Terphenyl	84-15-1	88	%	70-135	12.20.18 00.03	



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH03A**  
 Lab Sample Id: 608832-005

Matrix: Soil  
 Date Collected: 12.13.18 12.15

Date Received: 12.15.18 09.30  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3073331

Date Prep: 12.18.18 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.18 06.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 06.32	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	95		%	70-130	12.19.18 06.32	
1,4-Difluorobenzene	540-36-3	106		%	70-130	12.19.18 06.32	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH03B</b>	Matrix: Soil	Date Received: 12.15.18 09.30
Lab Sample Id: 608832-006	Date Collected: 12.13.18 12.20	Sample Depth: 2 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.17.18 16.00	Basis: Wet Weight
Seq Number: 3073190		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	103	4.95	mg/kg	12.18.18 03.39		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.19.18 18.00
Seq Number: 3073493	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.20.18 00.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.20.18 00.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.20.18 00.24	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.20.18 00.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.20.18 00.24	
o-Terphenyl	84-15-1	91	%	70-135	12.20.18 00.24	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH03B**  
 Lab Sample Id: 608832-006

Matrix: Soil  
 Date Collected: 12.13.18 12.20

Date Received: 12.15.18 09.30  
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.18.18 16.30

Basis: Wet Weight

Seq Number: 3073331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 06.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 06.51	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.19.18 06.51		
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.19.18 06.51		

- 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      **SQL** 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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073190  
MB Sample Id: 7668220-1-BLK

Matrix: Solid  
LCS Sample Id: 7668220-1-BKS

Prep Method: E300P  
Date Prep: 12.17.18  
LCSD Sample Id: 7668220-1-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	274	110	274	110	90-110	0	20	mg/kg	12.18.18 01:30	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073190  
Parent Sample Id: 608832-003

Matrix: Soil  
MS Sample Id: 608832-003 S

Prep Method: E300P  
Date Prep: 12.17.18  
MSD Sample Id: 608832-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	53.1	250	289	94	291	95	90-110	1	20	mg/kg	12.18.18 03:20	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073190  
Parent Sample Id: 608888-004

Matrix: Soil  
MS Sample Id: 608888-004 S

Prep Method: E300P  
Date Prep: 12.17.18  
MSD Sample Id: 608888-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	248	100	254	102	90-110	2	20	mg/kg	12.18.18 01:48	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3073493  
MB Sample Id: 7668405-1-BLK

Matrix: Solid  
LCS Sample Id: 7668405-1-BKS

Prep Method: TX1005P  
Date Prep: 12.19.18  
LCSD Sample Id: 7668405-1-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	932	93	921	92	70-135	1	20	mg/kg	12.19.18 21:18	
Diesel Range Organics (DRO)	<8.13	1000	973	97	965	97	70-135	1	20	mg/kg	12.19.18 21:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		125		121		70-135	%	12.19.18 21:18
o-Terphenyl	109		106		106		70-135	%	12.19.18 21:18

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3073493

Parent Sample Id: 608832-001

Matrix: Soil

MS Sample Id: 608832-001 S

Prep Method: TX1005P

Date Prep: 12.19.18

MSD Sample Id: 608832-001 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)	<7.97	996	853	86	868	87	70-135	2	20	mg/kg	12.19.18 22:19	
Diesel Range Organics (DRO)	89.1	996	940	85	954	87	70-135	1	20	mg/kg	12.19.18 22:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		107		70-135	%	12.19.18 22:19
o-Terphenyl	96		95		70-135	%	12.19.18 22:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073325

MB Sample Id: 7668314-1-BLK

Matrix: Solid

LCS Sample Id: 7668314-1-BKS

Prep Method: SW5030B

Date Prep: 12.18.18

LCSD Sample Id: 7668314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.104	104	0.0983	98	70-130	6	35	mg/kg	12.18.18 18:17	
Toluene	<0.000457	0.100	0.0939	94	0.0896	90	70-130	5	35	mg/kg	12.18.18 18:17	
Ethylbenzene	<0.000566	0.100	0.102	102	0.0979	98	70-130	4	35	mg/kg	12.18.18 18:17	
m,p-Xylenes	<0.00102	0.200	0.186	93	0.178	89	70-130	4	35	mg/kg	12.18.18 18:17	
o-Xylene	<0.000345	0.100	0.0905	91	0.0865	87	70-130	5	35	mg/kg	12.18.18 18:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		104		70-130	%	12.18.18 18:17
4-Bromofluorobenzene	82		88		88		70-130	%	12.18.18 18:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073331

MB Sample Id: 7668320-1-BLK

Matrix: Solid

LCS Sample Id: 7668320-1-BKS

Prep Method: SW5030B

Date Prep: 12.18.18

LCSD Sample Id: 7668320-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0887	89	0.0848	85	70-130	4	35	mg/kg	12.19.18 04:02	
Toluene	<0.000455	0.0998	0.0839	84	0.0803	80	70-130	4	35	mg/kg	12.19.18 04:02	
Ethylbenzene	<0.000564	0.0998	0.0897	90	0.0857	86	70-130	5	35	mg/kg	12.19.18 04:02	
m,p-Xylenes	<0.00101	0.200	0.162	81	0.155	78	70-130	4	35	mg/kg	12.19.18 04:02	
o-Xylene	<0.00200	0.0998	0.0811	81	0.0775	78	70-130	5	35	mg/kg	12.19.18 04:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		101		101		70-130	%	12.19.18 04:02
4-Bromofluorobenzene	81		86		86		70-130	%	12.19.18 04:02

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073325

Parent Sample Id: 608779-001

Matrix: Soil

MS Sample Id: 608779-001 S

Prep Method: SW5030B

Date Prep: 12.18.18

MSD Sample Id: 608779-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0904	90	0.0798	80	70-130	12	35	mg/kg	12.18.18 18:55	
Toluene	<0.000459	0.101	0.0781	77	0.0668	67	70-130	16	35	mg/kg	12.18.18 18:55	X
Ethylbenzene	<0.000569	0.101	0.0816	81	0.0672	67	70-130	19	35	mg/kg	12.18.18 18:55	X
m,p-Xylenes	<0.00102	0.202	0.150	74	0.125	63	70-130	18	35	mg/kg	12.18.18 18:55	X
o-Xylene	<0.000347	0.101	0.0748	74	0.0637	64	70-130	16	35	mg/kg	12.18.18 18:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	12.18.18 18:55
4-Bromofluorobenzene	89		89		70-130	%	12.18.18 18:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073331

Parent Sample Id: 608832-003

Matrix: Soil

MS Sample Id: 608832-003 S

Prep Method: SW5030B

Date Prep: 12.18.18

MSD Sample Id: 608832-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0523	52	0.0615	61	70-130	16	35	mg/kg	12.19.18 04:40	X
Toluene	<0.000456	0.100	0.0541	54	0.0634	63	70-130	16	35	mg/kg	12.19.18 04:40	X
Ethylbenzene	<0.000565	0.100	0.0620	62	0.0708	70	70-130	13	35	mg/kg	12.19.18 04:40	X
m,p-Xylenes	<0.00101	0.200	0.123	62	0.137	68	70-130	11	35	mg/kg	12.19.18 04:40	X
o-Xylene	<0.000344	0.100	0.0626	63	0.0700	69	70-130	11	35	mg/kg	12.19.18 04:40	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	12.19.18 04:40
4-Bromofluorobenzene	85		87		70-130	%	12.19.18 04:40

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



Setting the Standard since 1990  
 Stafford, Texas (281-240-4200)  
 Dallas, Texas (214-902-0300)

# CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)  
 Midland, Texas (432-704-5251)

WWW.XENCO.COM

Phoenix, Arizona (480-355-0900)

Client / Reporting Information			Project Information			Analytical Information			Matrix Codes						
Company Name / Branch: <u>IT Environmental Serv. Inc.</u>			Project Name/Number: <u>BEU Hackberry 34 Battery</u>			Xenoco Quote #			Xenoco Job #						
Company Address: <u>2900 NW 34th St. Building 1 Unit 103 Midway TX 79720</u>			Project Location: <u>Eddy County</u>			608832			608832						
Email: <u>ahaber@itenv.com</u> Phone No: <u>(432) 704-5178</u>			Invoice To: <u>Kyle Littrell</u>												
Project Contact: <u>Alicia Baker</u>			PO Number:												
Sampler's Name: <u>Anna Byers</u>															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	CI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	PH01 A	0.5'	12/12	1045	S	1									
2	PH01 B	1.0'	12/13	1046	S	1									
3	PH02 A	0.5'		1015	S	1									
4	PH02 B	1.0'		1020	S	1									
5	PH03 A	1.0'		1215	S	1									
6	PH03 B	2.0'		1220	S	1									
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  
 TRRP Checklist

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

Relinquished by Sampler: Anna Byers Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18

Level II Std QC  
 Level III Std QC - Forms  
 Level 3 (CLP Forms)  
 TRRP Level IV  
 Level IV (Full Data Pkg /raw data)  
 TRRP Checklist

Relinquished by: [Signature] Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18  
 Relinquished by: [Signature] Date Time: 12/14/18

On Ice  Cooler Temp 38.3 Thermo, Corr. Factor RG-0.1  
 Preserved when applicable

FED-EX / UPS: Tracking # \_\_\_\_\_

Notes: Signatures of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75 will be applied to each project. Xenoco's liability will be limited to the cost of samples. Any samples received by Xenoco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

77398218173

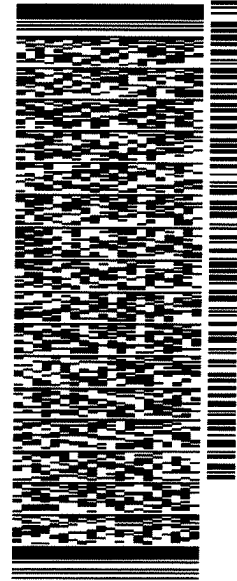


ORIGIN ID:CAOA (575) 887-6245  
XENCO SATURDAY  
PAC N MAIL  
910 W PIERCE ST  
CARLSBAD, NM 88220  
UNITED STATES US

SHIP DATE: 14DEC18  
ACTWTGT: 35.00 LB  
CAD: 101813706N/ET4040  
DIMS: 19x13x16 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 REF: XENCO  
INV/ DEPT:  
PO.

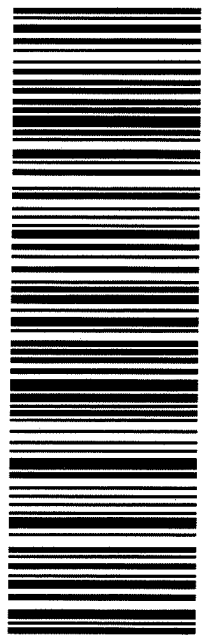


TRK# 7739 8211 8173  
0201

SATURDAY HOLD  
PRIORITY OVERNIGHT

41 MAFA

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552J2/E4AF/DCA5

**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.
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# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



**Client:** LT Environmental, Inc.

**Date/ Time Received:** 12/15/2018 09:30:00 AM

**Work Order #:** 608832

**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)?	3.7
#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)?	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:**   
 Katie Lowe

Date: 12/17/2018

**Checklist reviewed by:**   
 Jessica Kramer

Date: 12/18/2018

# Analytical Report 609034

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**BEU Hackberry 34 Battery**

**2RP5026**

**27-DEC-18**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), 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 (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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)



27-DEC-18

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

Reference: XENCO Report No(s): **609034**  
**BEU Hackberry 34 Battery**  
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) 609034. 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. 609034 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**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01A	S	12-14-18 09:35	0.5 ft	609034-001
BH01B	S	12-14-18 09:40	1 ft	609034-002
BH02A	S	12-14-18 10:40	0.5 ft	609034-003
BH02B	S	12-14-18 10:45	1 ft	609034-004
BH03A	S	12-14-18 12:00	0.5 ft	609034-005
BH03B	S	12-14-18 12:15	1 ft	609034-006
BH04A	S	12-14-18 12:25	0.5 ft	609034-007
BH04B	S	12-14-18 12:35	1 ft	609034-008
BH05A	S	12-14-18 12:45	0.5 ft	609034-009
BH05B	S	12-14-18 12:55	1 ft	609034-010
BH06A	S	12-14-18 14:00	0.5 ft	609034-011
BH06B	S	12-14-18 14:05	1 ft	609034-012
BH07A	S	12-14-18 14:15	0.5 ft	609034-013
BH07B	S	12-14-18 14:25	1 ft	609034-014
BH08A	S	12-14-18 14:30	0.5 ft	609034-015
BH08B	S	12-14-18 14:40	1 ft	609034-016
PH04A	S	12-14-18 14:50	0.5 ft	609034-017
PH04B	S	12-14-18 15:05	1 ft	609034-018
BH09A	S	12-14-18 16:00	3 ft	609034-019
BH09B	S	12-14-18 16:15	3.5 ft	609034-020



## CASE NARRATIVE

*Client Name: LT Environmental, Inc.*

*Project Name: BEU Hackberry 34 Battery*

Project ID: 2RP5026  
Work Order Number(s): 609034

Report Date: 27-DEC-18  
Date Received: 12/18/2018

---

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

None

---

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

None

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

Batch: LBA-3073519 Inorganic Anions by EPA 300

Chloride recovered above QC limits in the laboratory control sample. Samples in the analytical batch are: 609034-001.

Compound(s) reported above QC limits for the Blank Spike and Blank Spike Duplicate. Batch passes in accordance to Marginal Exceedence (NELAC Quality Systems, Appendix D). Daily CCV and ICV are within QC Limits. Sample data reported as valid.

Batch: LBA-3073556 Inorganic Anions by EPA 300

Lab Sample ID 609034-019 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 609034-002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3073646 BTEX by EPA 8021B

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

Batch: LBA-3073659 BTEX by EPA 8021B

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

Batch: LBA-3074107 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 609034



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:** 2RP5026  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Tue Dec-18-18 12:15 pm  
**Report Date:** 27-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609034-001	609034-002	609034-003	609034-004	609034-005	609034-006
	<i>Field Id:</i>	BH01A	BH01B	BH02A	BH02B	BH03A	BH03B
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-14-18 09:35	Dec-14-18 09:40	Dec-14-18 10:40	Dec-14-18 10:45	Dec-14-18 12:00	Dec-14-18 12:15
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00
	<i>Analyzed:</i>	Dec-20-18 14:09	Dec-20-18 14:30	Dec-20-18 15:57	Dec-20-18 19:43	Dec-20-18 16:40	Dec-20-18 17:01
	<i>Units/RL:</i>	mg/kg 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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-19-18 16:30	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00
	<i>Analyzed:</i>	Dec-20-18 04:37	Dec-20-18 09:15	Dec-20-18 09:33	Dec-20-18 09:39	Dec-20-18 09:45	Dec-20-18 09:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		681 4.98	879 4.96	28.1 4.97	7.91 4.98	80.4 5.00	118 5.00
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00
	<i>Analyzed:</i>	Dec-24-18 12:39	Dec-24-18 13:41	Dec-24-18 14:02	Dec-24-18 14:23	Dec-24-18 14:44	Dec-24-18 15:06
	<i>Units/RL:</i>	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	<14.9 14.9	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	34.9 15.0	<15.0 15.0	<15.0 15.0	20.9 14.9	72.4 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	15.1 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9
Total TPH		<15.0 15.0	50.0 15.0	<15.0 15.0	<15.0 15.0	20.9 14.9	72.4 14.9

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

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 609034



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:** 2RP5026  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Tue Dec-18-18 12:15 pm  
**Report Date:** 27-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609034-007	609034-008	609034-009	609034-010	609034-011	609034-012
	<i>Field Id:</i>	BH04A	BH04B	BH05A	BH05B	BH06A	BH06B
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-14-18 12:25	Dec-14-18 12:35	Dec-14-18 12:45	Dec-14-18 12:55	Dec-14-18 14:00	Dec-14-18 14:05
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00	Dec-19-18 16:00
	<i>Analyzed:</i>	Dec-20-18 17:23	Dec-20-18 17:44	Dec-20-18 18:05	Dec-20-18 18:38	Dec-20-18 19:00	Dec-20-18 19:21
	<i>Units/RL:</i>	mg/kg 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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
m,p-Xylenes	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	
o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00
	<i>Analyzed:</i>	Dec-20-18 10:24	Dec-20-18 10:30	Dec-20-18 10:36	Dec-20-18 10:42	Dec-20-18 10:49	Dec-20-18 11:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride	18.0 5.00	21.8 4.95	10.4 4.98	7.14 4.97	5.64 5.00	32.6 5.00	
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00
	<i>Analyzed:</i>	Dec-24-18 15:27	Dec-24-18 15:49	Dec-24-18 16:10	Dec-24-18 16:31	Dec-24-18 17:34	Dec-24-18 17:54
	<i>Units/RL:</i>	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)	21.2 15.0	17.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 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	21.2 15.0	17.9 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	

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*Jessica Kramer*

Jessica Kramer  
Project Assistant





# Certificate of Analysis Summary 609034



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:** 2RP5026  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Tue Dec-18-18 12:15 pm  
**Report Date:** 27-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609034-013	609034-014	609034-015	609034-016	609034-017	609034-018
	<i>Field Id:</i>	BH07A	BH07B	BH08A	BH08B	PH04A	PH04B
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-14-18 14:15	Dec-14-18 14:25	Dec-14-18 14:30	Dec-14-18 14:40	Dec-14-18 14:50	Dec-14-18 15:05
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-20-18 17:15	Dec-20-18 17:15	Dec-20-18 17:15	Dec-20-18 17:15	Dec-20-18 17:15	Dec-20-18 17:15
	<i>Analyzed:</i>	Dec-21-18 08:24	Dec-21-18 08:46	Dec-21-18 09:09	Dec-21-18 09:30	Dec-21-18 09:51	Dec-21-18 10:14
	<i>Units/RL:</i>	mg/kg 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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
	o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00	Dec-20-18 08:00
	<i>Analyzed:</i>	Dec-20-18 11:36	Dec-20-18 11:42	Dec-20-18 11:49	Dec-20-18 11:55	Dec-20-18 12:01	Dec-20-18 12:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride	2050 25.0	2080 24.9	3160 24.9	3260 50.0	34.0 4.96	29.8 4.99	
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00	Dec-23-18 15:00
	<i>Analyzed:</i>	Dec-24-18 18:15	Dec-24-18 18:35	Dec-24-18 18:56	Dec-24-18 19:17	Dec-24-18 19:38	Dec-24-18 19:59
	<i>Units/RL:</i>	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	21.1 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Diesel Range Organics (DRO)	33.9 15.0	<15.0 15.0	195 15.0	180 15.0	25.8 14.9	15.1 15.0
Motor Oil Range Hydrocarbons (MRO)	25.3 15.0	<15.0 15.0	145 15.0	133 15.0	<14.9 14.9	<15.0 15.0	
Total TPH	59.2 15.0	<15.0 15.0	361 15.0	313 15.0	25.8 14.9	15.1 15.0	

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*Jessica Kramer*

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 609034



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:** 2RP5026  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Tue Dec-18-18 12:15 pm  
**Report Date:** 27-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609034-019	609034-020			
	<i>Field Id:</i>	BH09A	BH09B			
	<i>Depth:</i>	3- ft	3.5- ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Dec-14-18 16:00	Dec-14-18 16:15			
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-20-18 17:15	Dec-26-18 15:00			
	<i>Analyzed:</i>	Dec-21-18 10:35	Dec-27-18 11:20			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200			
Toluene		<0.00200 0.00200	<0.00200 0.00200			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200			
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200			
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-20-18 08:00	Dec-20-18 08:00			
	<i>Analyzed:</i>	Dec-20-18 10:55	Dec-20-18 12:13			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		124 4.99	113 5.00			
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-23-18 15:00	Dec-23-18 15:00			
	<i>Analyzed:</i>	Dec-24-18 20:20	Dec-24-18 20:41			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		<15.0 15.0	42.9 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0			
Total TPH		<15.0 15.0	42.9 15.0			

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*Jessica Kramer*

Jessica Kramer  
Project Assistant

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH01A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-001	Date Collected: 12.14.18 09.35	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.19.18 16.30	Basis: Wet Weight
Seq Number: 3073519		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>681</b>	4.98	mg/kg	12.20.18 04.37		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 12.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 12.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 12.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 12.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.24.18 12.39	
o-Terphenyl	84-15-1	92	%	70-135	12.24.18 12.39	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH01A**  
 Lab Sample Id: 609034-001

Matrix: Soil  
 Date Collected: 12.14.18 09.35

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 14.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 14.09	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.20.18 14.09		
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.20.18 14.09		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH01B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-002	Date Collected: 12.14.18 09.40	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>879</b>	4.96	mg/kg	12.20.18 09.15		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 13.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<b>34.9</b>	15.0	mg/kg	12.24.18 13.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<b>15.1</b>	15.0	mg/kg	12.24.18 13.41		1
<b>Total TPH</b>	PHC635	<b>50.0</b>	15.0	mg/kg	12.24.18 13.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.24.18 13.41	
o-Terphenyl	84-15-1	86	%	70-135	12.24.18 13.41	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH01B**  
 Lab Sample Id: 609034-002

Matrix: Soil  
 Date Collected: 12.14.18 09.40

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 14.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 14.30	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	96		%	70-130	12.20.18 14.30	
4-Bromofluorobenzene	460-00-4	99		%	70-130	12.20.18 14.30	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH02A**  
 Lab Sample Id: 609034-003

Matrix: Soil  
 Date Collected: 12.14.18 10.40

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3073556

Date Prep: 12.20.18 08.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.1	4.97	mg/kg	12.20.18 09.33		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3073958

Date Prep: 12.23.18 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 14.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 14.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 14.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 14.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.24.18 14.02	
o-Terphenyl	84-15-1	103	%	70-135	12.24.18 14.02	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH02A**  
 Lab Sample Id: 609034-003

Matrix: Soil  
 Date Collected: 12.14.18 10.40

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 15.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 15.57	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.20.18 15.57		
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.20.18 15.57		



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH02B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-004	Date Collected: 12.14.18 10.45	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.91	4.98	mg/kg	12.20.18 09.39		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 14.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 14.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 14.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.24.18 14.23	
o-Terphenyl	84-15-1	105	%	70-135	12.24.18 14.23	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH02B**  
 Lab Sample Id: 609034-004

Matrix: Soil  
 Date Collected: 12.14.18 10.45

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 19.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 19.43	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.20.18 19.43		
1,4-Difluorobenzene	540-36-3	88	%	70-130	12.20.18 19.43		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH03A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-005	Date Collected: 12.14.18 12.00	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>80.4</b>	5.00	mg/kg	12.20.18 09.45		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.24.18 14.44	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>20.9</b>	14.9	mg/kg	12.24.18 14.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.24.18 14.44	U	1
<b>Total TPH</b>	PHC635	<b>20.9</b>	14.9	mg/kg	12.24.18 14.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.24.18 14.44	
o-Terphenyl	84-15-1	94	%	70-135	12.24.18 14.44	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH03A**  
 Lab Sample Id: 609034-005

Matrix: Soil  
 Date Collected: 12.14.18 12.00

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3073646

Date Prep: 12.19.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 16.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 16.40	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	98		%	70-130	12.20.18 16.40	
1,4-Difluorobenzene	540-36-3	93		%	70-130	12.20.18 16.40	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH03B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-006	Date Collected: 12.14.18 12.15	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>118</b>	5.00	mg/kg	12.20.18 09.52		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.24.18 15.06	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>72.4</b>	14.9	mg/kg	12.24.18 15.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.24.18 15.06	U	1
<b>Total TPH</b>	PHC635	<b>72.4</b>	14.9	mg/kg	12.24.18 15.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.24.18 15.06	
o-Terphenyl	84-15-1	101	%	70-135	12.24.18 15.06	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH03B**  
 Lab Sample Id: 609034-006

Matrix: Soil  
 Date Collected: 12.14.18 12.15

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 17.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 17.01	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.20.18 17.01		
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.20.18 17.01		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH04A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-007	Date Collected: 12.14.18 12.25	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.0	5.00	mg/kg	12.20.18 10.24		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 15.27	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	21.2	15.0	mg/kg	12.24.18 15.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 15.27	U	1
<b>Total TPH</b>	PHC635	21.2	15.0	mg/kg	12.24.18 15.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.24.18 15.27	
o-Terphenyl	84-15-1	93	%	70-135	12.24.18 15.27	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH04A**  
 Lab Sample Id: 609034-007

Matrix: Soil  
 Date Collected: 12.14.18 12.25

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 17.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 17.23	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.20.18 17.23		
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.20.18 17.23		



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH04B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-008	Date Collected: 12.14.18 12.35	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.8	4.95	mg/kg	12.20.18 10.30		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 15.49	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>17.9</b>	15.0	mg/kg	12.24.18 15.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 15.49	U	1
<b>Total TPH</b>	PHC635	<b>17.9</b>	15.0	mg/kg	12.24.18 15.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.24.18 15.49	
o-Terphenyl	84-15-1	95	%	70-135	12.24.18 15.49	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH04B**  
 Lab Sample Id: 609034-008

Matrix: Soil  
 Date Collected: 12.14.18 12.35

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 17.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 17.44	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.20.18 17.44		
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.20.18 17.44		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH05A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-009	Date Collected: 12.14.18 12.45	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.4	4.98	mg/kg	12.20.18 10.36		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 16.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 16.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 16.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 16.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.24.18 16.10	
o-Terphenyl	84-15-1	91	%	70-135	12.24.18 16.10	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH05A**  
 Lab Sample Id: 609034-009

Matrix: Soil  
 Date Collected: 12.14.18 12.45

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 18.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 18.05	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.20.18 18.05		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.20.18 18.05		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH05B**  
 Lab Sample Id: 609034-010

Matrix: Soil  
 Date Collected: 12.14.18 12.55

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3073556

Date Prep: 12.20.18 08.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.14	4.97	mg/kg	12.20.18 10.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3073958

Date Prep: 12.23.18 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 16.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 16.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 16.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 16.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.24.18 16.31	
o-Terphenyl	84-15-1	97	%	70-135	12.24.18 16.31	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH05B**  
 Lab Sample Id: 609034-010

Matrix: Soil  
 Date Collected: 12.14.18 12.55

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 18.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 18.38	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.20.18 18.38		
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.20.18 18.38		



# Certificate of Analytical Results 609034



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH06A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-011	Date Collected: 12.14.18 14.00	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.64	5.00	mg/kg	12.20.18 10.49		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 17.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.24.18 17.34	
o-Terphenyl	84-15-1	92	%	70-135	12.24.18 17.34	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH06A**  
 Lab Sample Id: 609034-011

Matrix: Soil  
 Date Collected: 12.14.18 14.00

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 16.00

Basis: Wet Weight

Seq Number: 3073646

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 19.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 19.00	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.20.18 19.00		
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.20.18 19.00		



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH06B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-012	Date Collected: 12.14.18 14.05	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.6	5.00	mg/kg	12.20.18 11.15		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.24.18 17.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.24.18 17.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.24.18 17.54	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.24.18 17.54	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
	1-Chlorooctane	111-85-3	92	%	70-135	12.24.18 17.54	
	o-Terphenyl	84-15-1	93	%	70-135	12.24.18 17.54	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH06B**  
 Lab Sample Id: 609034-012

Matrix: Soil  
 Date Collected: 12.14.18 14.05

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3073646

Date Prep: 12.19.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 19.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 19.21	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.20.18 19.21		
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.20.18 19.21		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH07A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-013	Date Collected: 12.14.18 14.15	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2050	25.0	mg/kg	12.20.18 11.36		5

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	33.9	15.0	mg/kg	12.24.18 18.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	25.3	15.0	mg/kg	12.24.18 18.15		1
<b>Total TPH</b>	PHC635	<b>59.2</b>	15.0	mg/kg	12.24.18 18.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.24.18 18.15	
o-Terphenyl	84-15-1	97	%	70-135	12.24.18 18.15	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH07A**  
 Lab Sample Id: 609034-013

Matrix: Soil  
 Date Collected: 12.14.18 14.15

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 08.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 08.24	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.21.18 08.24		
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.21.18 08.24		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH07B**  
 Lab Sample Id: 609034-014

Matrix: Soil  
 Date Collected: 12.14.18 14.25

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.20.18 08.00

Basis: Wet Weight

Seq Number: 3073556

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2080	24.9	mg/kg	12.20.18 11.42		5

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 12.23.18 15.00

Basis: Wet Weight

Seq Number: 3073958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 18.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 18.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.24.18 18.35	
o-Terphenyl	84-15-1	94	%	70-135	12.24.18 18.35	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH07B**  
 Lab Sample Id: 609034-014

Matrix: Soil  
 Date Collected: 12.14.18 14.25

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 08.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 08.46	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.21.18 08.46		
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.21.18 08.46		



# Certificate of Analytical Results 609034



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH08A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-015	Date Collected: 12.14.18 14.30	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3160	24.9	mg/kg	12.20.18 11.49		5

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	21.1	15.0	mg/kg	12.24.18 18.56		1
Diesel Range Organics (DRO)	C10C28DRO	195	15.0	mg/kg	12.24.18 18.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	145	15.0	mg/kg	12.24.18 18.56		1
<b>Total TPH</b>	PHC635	<b>361</b>	15.0	mg/kg	12.24.18 18.56		1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	100	%	70-135	12.24.18 18.56		
o-Terphenyl	84-15-1	100	%	70-135	12.24.18 18.56		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH08A**  
 Lab Sample Id: 609034-015

Matrix: Soil  
 Date Collected: 12.14.18 14.30

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 09.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 09.09	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.21.18 09.09		
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.21.18 09.09		



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH08B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-016	Date Collected: 12.14.18 14.40	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3260	50.0	mg/kg	12.20.18 11.55		10

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 19.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	180	15.0	mg/kg	12.24.18 19.17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	133	15.0	mg/kg	12.24.18 19.17		1
<b>Total TPH</b>	PHC635	<b>313</b>	15.0	mg/kg	12.24.18 19.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.24.18 19.17	
o-Terphenyl	84-15-1	95	%	70-135	12.24.18 19.17	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH08B**  
 Lab Sample Id: 609034-016

Matrix: Soil  
 Date Collected: 12.14.18 14.40

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 09.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 09.30	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	117	%	70-130	12.21.18 09.30		
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.21.18 09.30		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH04A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-017	Date Collected: 12.14.18 14.50	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.0	4.96	mg/kg	12.20.18 12.01		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.24.18 19.38	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>25.8</b>	14.9	mg/kg	12.24.18 19.38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.24.18 19.38	U	1
<b>Total TPH</b>	PHC635	<b>25.8</b>	14.9	mg/kg	12.24.18 19.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.24.18 19.38	
o-Terphenyl	84-15-1	91	%	70-135	12.24.18 19.38	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH04A**  
 Lab Sample Id: 609034-017

Matrix: Soil  
 Date Collected: 12.14.18 14.50

Date Received: 12.18.18 12.15  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 09.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 09.51	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.21.18 09.51		
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.21.18 09.51		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>PH04B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-018	Date Collected: 12.14.18 15.05	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.8	4.99	mg/kg	12.20.18 12.07		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 19.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.1	15.0	mg/kg	12.24.18 19.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 19.59	U	1
<b>Total TPH</b>	PHC635	15.1	15.0	mg/kg	12.24.18 19.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.24.18 19.59	
o-Terphenyl	84-15-1	89	%	70-135	12.24.18 19.59	



# Certificate of Analytical Results 609034



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **PH04B**  
 Lab Sample Id: 609034-018

Matrix: Soil  
 Date Collected: 12.14.18 15.05

Date Received: 12.18.18 12.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 10.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 10.14	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	113		%	70-130	12.21.18 10.14	
4-Bromofluorobenzene	460-00-4	123		%	70-130	12.21.18 10.14	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH09A</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-019	Date Collected: 12.14.18 16.00	Sample Depth: 3 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	124	4.99	mg/kg	12.20.18 10.55		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 20.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.24.18 20.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 20.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.24.18 20.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.24.18 20.20	
o-Terphenyl	84-15-1	92	%	70-135	12.24.18 20.20	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH09A**  
 Lab Sample Id: 609034-019

Matrix: Soil  
 Date Collected: 12.14.18 16.00

Date Received: 12.18.18 12.15  
 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.20.18 17.15

Basis: Wet Weight

Seq Number: 3073659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.21.18 10.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.21.18 10.35	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.21.18 10.35		
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.21.18 10.35		



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH09B</b>	Matrix: Soil	Date Received: 12.18.18 12.15
Lab Sample Id: 609034-020	Date Collected: 12.14.18 16.15	Sample Depth: 3.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 08.00	Basis: Wet Weight
Seq Number: 3073556		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	5.00	mg/kg	12.20.18 12.13		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.23.18 15.00
Seq Number: 3073958	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.24.18 20.41	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>42.9</b>	15.0	mg/kg	12.24.18 20.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.24.18 20.41	U	1
<b>Total TPH</b>	PHC635	<b>42.9</b>	15.0	mg/kg	12.24.18 20.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.24.18 20.41	
o-Terphenyl	84-15-1	91	%	70-135	12.24.18 20.41	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH09B**  
 Lab Sample Id: 609034-020

Matrix: Soil  
 Date Collected: 12.14.18 16.15

Date Received: 12.18.18 12.15  
 Sample Depth: 3.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.26.18 15.00

Basis: Wet Weight

Seq Number: 3074107

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.27.18 11.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.27.18 11.20	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.27.18 11.20		
4-Bromofluorobenzene	460-00-4	89	%	70-130	12.27.18 11.20		





LT Environmental, Inc.  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073519  
MB Sample Id: 7668399-1-BLK

Matrix: Solid  
LCS Sample Id: 7668399-1-BKS

Prep Method: E300P  
Date Prep: 12.19.18  
LCSD Sample Id: 7668399-1-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	312	125	273	109	90-110	13	20	mg/kg	12.20.18 01:28	H

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073556  
MB Sample Id: 7668400-1-BLK

Matrix: Solid  
LCS Sample Id: 7668400-1-BKS

Prep Method: E300P  
Date Prep: 12.20.18  
LCSD Sample Id: 7668400-1-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	257	103	90-110	1	20	mg/kg	12.20.18 09:02	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073519  
Parent Sample Id: 609032-005

Matrix: Soil  
MS Sample Id: 609032-005 S

Prep Method: E300P  
Date Prep: 12.19.18  
MSD Sample Id: 609032-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.855	249	268	108	273	110	90-110	2	20	mg/kg	12.20.18 01:46	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073519  
Parent Sample Id: 609033-006

Matrix: Soil  
MS Sample Id: 609033-006 S

Prep Method: E300P  
Date Prep: 12.19.18  
MSD Sample Id: 609033-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.27	250	274	109	274	109	90-110	0	20	mg/kg	12.20.18 03:18	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073556  
Parent Sample Id: 609034-002

Matrix: Soil  
MS Sample Id: 609034-002 S

Prep Method: E300P  
Date Prep: 12.20.18  
MSD Sample Id: 609034-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	879	248	1090	85	1090	85	90-110	0	20	mg/kg	12.20.18 09:21	X

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073556  
Parent Sample Id: 609034-019

Matrix: Soil  
MS Sample Id: 609034-019 S

Prep Method: E300P  
Date Prep: 12.20.18  
MSD Sample Id: 609034-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	124	250	379	102	387	105	90-110	2	20	mg/kg	12.20.18 11:01	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3073958  
MB Sample Id: 7668691-1-BLK

Matrix: Solid  
LCS Sample Id: 7668691-1-BKS

Prep Method: TX1005P  
Date Prep: 12.23.18  
LCSD Sample Id: 7668691-1-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	970	97	932	93	70-135	4	20	mg/kg	12.24.18 11:59	
Diesel Range Organics (DRO)	<8.13	1000	996	100	980	98	70-135	2	20	mg/kg	12.24.18 11:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		123		122		70-135	%	12.24.18 11:59
o-Terphenyl	112		119		110		70-135	%	12.24.18 11:59

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3073958  
Parent Sample Id: 609034-001

Matrix: Soil  
MS Sample Id: 609034-001 S

Prep Method: TX1005P  
Date Prep: 12.23.18  
MSD Sample Id: 609034-001 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)	<7.99	998	996	100	902	90	70-135	10	20	mg/kg	12.24.18 13:00	
Diesel Range Organics (DRO)	13.3	998	1010	100	907	90	70-135	11	20	mg/kg	12.24.18 13:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		104		70-135	%	12.24.18 13:00
o-Terphenyl	99		92		70-135	%	12.24.18 13:00

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073646

MB Sample Id: 7668531-1-BLK

Matrix: Solid

LCS Sample Id: 7668531-1-BKS

Prep Method: SW5030B

Date Prep: 12.19.18

LCSD Sample Id: 7668531-1-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	0.113	113	0.126	126	70-130	11	35	mg/kg	12.19.18 09:32	
Toluene	<0.00200	0.100	0.101	101	0.102	102	70-130	1	35	mg/kg	12.19.18 09:32	
Ethylbenzene	<0.00200	0.100	0.111	111	0.127	127	70-130	13	35	mg/kg	12.19.18 09:32	
m,p-Xylenes	<0.00400	0.200	0.228	114	0.259	130	70-130	13	35	mg/kg	12.19.18 09:32	
o-Xylene	<0.00200	0.100	0.107	107	0.122	122	70-130	13	35	mg/kg	12.19.18 09:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		103		111		70-130	%	12.19.18 09:32
4-Bromofluorobenzene	100		89		96		70-130	%	12.19.18 09:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073659

MB Sample Id: 7668541-1-BLK

Matrix: Solid

LCS Sample Id: 7668541-1-BKS

Prep Method: SW5030B

Date Prep: 12.20.18

LCSD Sample Id: 7668541-1-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	0.0978	98	0.0858	86	70-130	13	35	mg/kg	12.20.18 20:51	
Toluene	<0.00200	0.100	0.0825	83	0.0847	85	70-130	3	35	mg/kg	12.20.18 20:51	
Ethylbenzene	<0.00200	0.100	0.100	100	0.0914	91	70-130	9	35	mg/kg	12.20.18 20:51	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.191	96	70-130	6	35	mg/kg	12.20.18 20:51	
o-Xylene	<0.00200	0.100	0.0962	96	0.0889	89	70-130	8	35	mg/kg	12.20.18 20:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		128		100		70-130	%	12.20.18 20:51
4-Bromofluorobenzene	121		111		81		70-130	%	12.20.18 20:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074107

MB Sample Id: 7668790-1-BLK

Matrix: Solid

LCS Sample Id: 7668790-1-BKS

Prep Method: SW5030B

Date Prep: 12.26.18

LCSD Sample Id: 7668790-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.113	113	0.104	104	70-130	8	35	mg/kg	12.27.18 09:27	
Toluene	<0.000456	0.100	0.0947	95	0.0905	91	70-130	5	35	mg/kg	12.27.18 09:27	
Ethylbenzene	<0.000565	0.100	0.0991	99	0.0952	95	70-130	4	35	mg/kg	12.27.18 09:27	
m,p-Xylenes	<0.00101	0.200	0.179	90	0.173	87	70-130	3	35	mg/kg	12.27.18 09:27	
o-Xylene	<0.000344	0.100	0.0885	89	0.0865	87	70-130	2	35	mg/kg	12.27.18 09:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		107		106		70-130	%	12.27.18 09:27
4-Bromofluorobenzene	79		85		88		70-130	%	12.27.18 09:27

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073646

Parent Sample Id: 608880-021

Matrix: Soil

MS Sample Id: 608880-021 S

Prep Method: SW5030B

Date Prep: 12.19.18

MSD Sample Id: 608880-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0633	63	0.0835	84	70-130	28	35	mg/kg	12.20.18 09:27	X
Toluene	<0.00200	0.100	0.0556	56	0.0767	77	70-130	32	35	mg/kg	12.20.18 09:27	X
Ethylbenzene	<0.00200	0.100	0.0675	68	0.0851	85	70-130	23	35	mg/kg	12.20.18 09:27	X
m,p-Xylenes	<0.00400	0.200	0.123	62	0.159	80	70-130	26	35	mg/kg	12.20.18 09:27	X
o-Xylene	<0.00200	0.100	0.0673	67	0.0825	83	70-130	20	35	mg/kg	12.20.18 09:27	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	122		115		70-130	%	12.20.18 09:27
4-Bromofluorobenzene	109		110		70-130	%	12.20.18 09:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073659

Parent Sample Id: 609503-001

Matrix: Soil

MS Sample Id: 609503-001 S

Prep Method: SW5030B

Date Prep: 12.20.18

MSD Sample Id: 609503-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.0980	98	70-130	6	35	mg/kg	12.20.18 22:03	
Toluene	<0.00200	0.100	0.0868	87	0.0824	82	70-130	5	35	mg/kg	12.20.18 22:03	
Ethylbenzene	<0.00200	0.100	0.105	105	0.100	100	70-130	5	35	mg/kg	12.20.18 22:03	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.202	101	70-130	5	35	mg/kg	12.20.18 22:03	
o-Xylene	<0.00200	0.100	0.102	102	0.0978	98	70-130	4	35	mg/kg	12.20.18 22:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	122		122		70-130	%	12.20.18 22:03
4-Bromofluorobenzene	119		123		70-130	%	12.20.18 22:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3074107

Parent Sample Id: 609206-043

Matrix: Soil

MS Sample Id: 609206-043 S

Prep Method: SW5030B

Date Prep: 12.26.18

MSD Sample Id: 609206-043 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0903	90	0.0986	98	70-130	9	35	mg/kg	12.27.18 10:05	
Toluene	<0.000457	0.100	0.0800	80	0.0854	85	70-130	7	35	mg/kg	12.27.18 10:05	
Ethylbenzene	<0.000566	0.100	0.0847	85	0.0902	89	70-130	6	35	mg/kg	12.27.18 10:05	
m,p-Xylenes	<0.00102	0.200	0.154	77	0.164	81	70-130	6	35	mg/kg	12.27.18 10:05	
o-Xylene	<0.000345	0.100	0.0765	77	0.0802	79	70-130	5	35	mg/kg	12.27.18 10:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	12.27.18 10:05
4-Bromofluorobenzene	88		88		70-130	%	12.27.18 10:05

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







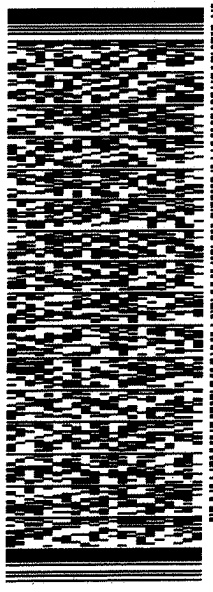
ORIGIN ID:CA0A (375) 887-6245  
XENCO  
PAC N MAIL  
910 W PIERCE ST  
CARLSBAD, NM 88220  
UNITED STATES US

SHIP DATE: 17DEC18  
ACT WGT: 7.00 LB  
CAD: 10/813/06/NET 4040  
DIMS: 26x14x15 IN  
BILL RECIPIENT

TO HOLD FOR XENCO  
FEDEX EXPRESS SHIP CENTER  
FEDEX SHIP CENTER  
3600 COUNTY RD 1276 S

MIDLAND TX 79711  
REF: (806) 794-1296  
NV:  
PC: DEPT:

552J2E4AF/DCA5

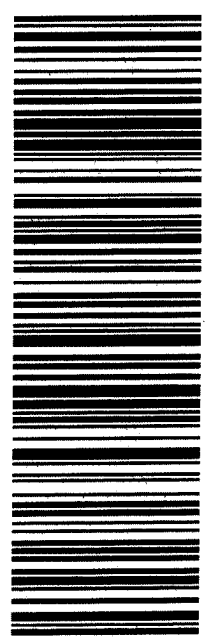


TRK# 7739 9868 0930  
0201

TUE - 18 DEC HOLD  
STANDARD OVERNIGHT

41 MAFA

HLD  
MAFA  
LBB  
TX-US



**After printing this label:**

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# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



**Client:** LT Environmental, Inc.

**Date/ Time Received:** 12/18/2018 12:15:00 PM

**Work Order #:** 609034

**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)?	1.5
#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)?	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:**   
 Katie Lowe

Date: 12/18/2018

**Checklist reviewed by:**   
 Jessica Kramer

Date: 12/18/2018

# Analytical Report 609172

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**BEU Hackberry 34 Battery**

**27-DEC-18**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), 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 (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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)



27-DEC-18

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

Reference: XENCO Report No(s): **609172**  
**BEU Hackberry 34 Battery**  
Project Address: Eddy County 2RP5026

**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) 609172. 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. 609172 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**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



# Sample Cross Reference 609172



## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH10A	S	12-17-18 09:35	0.5 ft	609172-001
BH10B	S	12-17-18 10:30	4.5 ft	609172-002
BH11A	S	12-17-18 11:20	0.5 ft	609172-003
BH11B	S	12-17-18 11:40	2 ft	609172-004



## CASE NARRATIVE

*Client Name: LT Environmental, Inc.*

*Project Name: BEU Hackberry 34 Battery*

Project ID:  
Work Order Number(s): 609172

Report Date: 27-DEC-18  
Date Received: 12/19/2018

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3073589 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 609172



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 Battery

**Project Id:**  
**Contact:** Adrian Baker  
**Project Location:** Eddy County 2RP5026

**Date Received in Lab:** Wed Dec-19-18 10:30 am  
**Report Date:** 27-DEC-18  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609172-001	609172-002	609172-003	609172-004		
	<i>Field Id:</i>	BH10A	BH10B	BH11A	BH11B		
	<i>Depth:</i>	0.5- ft	4.5- ft	0.5- ft	2- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-17-18 09:35	Dec-17-18 10:30	Dec-17-18 11:20	Dec-17-18 11:40		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-19-18 14:30	Dec-19-18 14:30	Dec-19-18 14:30	Dec-19-18 14:30		
	<i>Analyzed:</i>	Dec-20-18 20:24	Dec-20-18 20:44	Dec-20-18 21:03	Dec-20-18 21:22		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Toluene		0.00592 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00738 0.00200		
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00361 0.00200		
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400		
o-Xylene		0.0102 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		0.0102 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		0.0161 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.0110 0.00200		
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-20-18 14:30	Dec-20-18 14:30	Dec-20-18 14:30	Dec-20-18 14:30		
	<i>Analyzed:</i>	Dec-21-18 02:47	Dec-21-18 02:53	Dec-21-18 02:59	Dec-21-18 03:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		1240 4.99	1940 24.9	34.6 4.95	12.2 5.00		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-21-18 17:00	Dec-21-18 17:00	Dec-21-18 17:00	Dec-21-18 17:00		
	<i>Analyzed:</i>	Dec-22-18 17:41	Dec-22-18 18:01	Dec-22-18 19:02	Dec-22-18 19:23		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0		
Diesel Range Organics (DRO)		257 15.0	<14.9 14.9	280 15.0	18.6 15.0		
Motor Oil Range Hydrocarbons (MRO)		46.6 15.0	<14.9 14.9	55.3 15.0	<15.0 15.0		
Total TPH		304 15.0	<14.9 14.9	335 15.0	18.6 15.0		

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

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

*Jessica Kramer*

Jessica Kramer  
Project Assistant



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH10A</b>	Matrix: Soil	Date Received: 12.19.18 10.30
Lab Sample Id: 609172-001	Date Collected: 12.17.18 09.35	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 14.30	Basis: Wet Weight
Seq Number: 3073884		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1240	4.99	mg/kg	12.21.18 02.47		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.21.18 17.00
Seq Number: 3073906	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.22.18 17.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	257	15.0	mg/kg	12.22.18 17.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	46.6	15.0	mg/kg	12.22.18 17.41		1
<b>Total TPH</b>	PHC635	<b>304</b>	15.0	mg/kg	12.22.18 17.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.22.18 17.41	
o-Terphenyl	84-15-1	108	%	70-135	12.22.18 17.41	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH10A**  
 Lab Sample Id: 609172-001

Matrix: Soil  
 Date Collected: 12.17.18 09.35

Date Received: 12.19.18 10.30  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 14.30

Basis: Wet Weight

Seq Number: 3073589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 20.24	U	1
<b>Toluene</b>	108-88-3	<b>0.00592</b>	0.00200	mg/kg	12.20.18 20.24		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 20.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 20.24	U	1
<b>o-Xylene</b>	95-47-6	<b>0.0102</b>	0.00200	mg/kg	12.20.18 20.24		1
<b>Total Xylenes</b>	1330-20-7	<b>0.0102</b>	0.00200	mg/kg	12.20.18 20.24		1
<b>Total BTEX</b>		<b>0.0161</b>	0.00200	mg/kg	12.20.18 20.24		1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	102		%	70-130	12.20.18 20.24	
4-Bromofluorobenzene	460-00-4	107		%	70-130	12.20.18 20.24	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH10B**  
 Lab Sample Id: 609172-002

Matrix: Soil  
 Date Collected: 12.17.18 10.30

Date Received: 12.19.18 10.30  
 Sample Depth: 4.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3073884

Date Prep: 12.20.18 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1940	24.9	mg/kg	12.21.18 02.53		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3073906

Date Prep: 12.21.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.22.18 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.22.18 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.22.18 18.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.22.18 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.22.18 18.01	
o-Terphenyl	84-15-1	101	%	70-135	12.22.18 18.01	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH10B**  
 Lab Sample Id: 609172-002

Matrix: Soil  
 Date Collected: 12.17.18 10.30

Date Received: 12.19.18 10.30  
 Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 14.30

Basis: Wet Weight

Seq Number: 3073589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 20.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 20.44	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	90		%	70-130	12.20.18 20.44	
1,4-Difluorobenzene	540-36-3	109		%	70-130	12.20.18 20.44	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH11A</b>	Matrix: Soil	Date Received: 12.19.18 10.30
Lab Sample Id: 609172-003	Date Collected: 12.17.18 11.20	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 14.30	Basis: Wet Weight
Seq Number: 3073884		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.6	4.95	mg/kg	12.21.18 02.59		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.21.18 17.00
Seq Number: 3073906	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.22.18 19.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	280	15.0	mg/kg	12.22.18 19.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	55.3	15.0	mg/kg	12.22.18 19.02		1
<b>Total TPH</b>	PHC635	<b>335</b>	15.0	mg/kg	12.22.18 19.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.22.18 19.02	
o-Terphenyl	84-15-1	108	%	70-135	12.22.18 19.02	



# Certificate of Analytical Results 609172



## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id: **BH11A**  
 Lab Sample Id: 609172-003

Matrix: Soil  
 Date Collected: 12.17.18 11.20

Date Received: 12.19.18 10.30  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 14.30

Basis: Wet Weight

Seq Number: 3073589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 21.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 21.03	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.20.18 21.03		
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.20.18 21.03		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>BH11B</b>	Matrix: Soil	Date Received: 12.19.18 10.30
Lab Sample Id: 609172-004	Date Collected: 12.17.18 11.40	Sample Depth: 2 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.20.18 14.30	Basis: Wet Weight
Seq Number: 3073884		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.2	5.00	mg/kg	12.21.18 03.06		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 12.21.18 17.00
Seq Number: 3073906	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.22.18 19.23	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>18.6</b>	15.0	mg/kg	12.22.18 19.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.22.18 19.23	U	1
<b>Total TPH</b>	PHC635	<b>18.6</b>	15.0	mg/kg	12.22.18 19.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.22.18 19.23	
o-Terphenyl	84-15-1	100	%	70-135	12.22.18 19.23	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **BH11B**  
 Lab Sample Id: 609172-004

Matrix: Soil  
 Date Collected: 12.17.18 11.40

Date Received: 12.19.18 10.30  
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.19.18 14.30

Basis: Wet Weight

Seq Number: 3073589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 21.22	U	1
<b>Toluene</b>	108-88-3	<b>0.00738</b>	0.00200	mg/kg	12.20.18 21.22		1
<b>Ethylbenzene</b>	100-41-4	<b>0.00361</b>	0.00200	mg/kg	12.20.18 21.22		1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 21.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 21.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 21.22	U	1
<b>Total BTEX</b>		<b>0.0110</b>	0.00200	mg/kg	12.20.18 21.22		1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.20.18 21.22		
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.20.18 21.22		







# QC Summary 609172

**LT Environmental, Inc.**  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073884

MB Sample Id: 7668542-1-BLK

Matrix: Solid

LCS Sample Id: 7668542-1-BKS

Prep Method: E300P

Date Prep: 12.20.18

LCSD Sample Id: 7668542-1-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	268	107	272	109	90-110	1	20	mg/kg	12.20.18 23:59	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073884

Parent Sample Id: 609123-014

Matrix: Soil

MS Sample Id: 609123-014 S

Prep Method: E300P

Date Prep: 12.20.18

MSD Sample Id: 609123-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	511	249	738	91	725	86	90-110	2	20	mg/kg	12.21.18 00:19	X

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3073884

Parent Sample Id: 609123-020

Matrix: Soil

MS Sample Id: 609123-020 S

Prep Method: E300P

Date Prep: 12.20.18

MSD Sample Id: 609123-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.4	250	299	108	296	107	90-110	1	20	mg/kg	12.21.18 01:52	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3073906

MB Sample Id: 7668683-1-BLK

Matrix: Solid

LCS Sample Id: 7668683-1-BKS

Prep Method: TX1005P

Date Prep: 12.21.18

LCSD Sample Id: 7668683-1-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	975	98	1150	115	70-135	16	20	mg/kg	12.22.18 13:18	
Diesel Range Organics (DRO)	9.78	1000	977	98	1160	116	70-135	17	20	mg/kg	12.22.18 13:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		126		121		70-135	%	12.22.18 13:18
o-Terphenyl	94		114		126		70-135	%	12.22.18 13:18

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



LT Environmental, Inc.  
BEU Hackberry 34 Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3073906

Parent Sample Id: 609031-001

Matrix: Soil  
MS Sample Id: 609031-001 S

Prep Method: TX1005P

Date Prep: 12.21.18

MSD Sample Id: 609031-001 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)	<7.99	999	947	95	963	96	70-135	2	20		mg/kg	12.22.18 14:20	
Diesel Range Organics (DRO)	43.7	999	993	95	1000	96	70-135	1	20		mg/kg	12.22.18 14:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		123		70-135	%	12.22.18 14:20
o-Terphenyl	103		107		70-135	%	12.22.18 14:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073589

MB Sample Id: 7668445-1-BLK

Matrix: Solid  
LCS Sample Id: 7668445-1-BKS

Prep Method: SW5030B

Date Prep: 12.19.18

LCSD Sample Id: 7668445-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0864	86	0.0806	81	70-130	7	35		mg/kg	12.20.18 00:00	
Toluene	<0.000457	0.100	0.0805	81	0.0766	77	70-130	5	35		mg/kg	12.20.18 00:00	
Ethylbenzene	<0.000566	0.100	0.0867	87	0.0830	83	70-130	4	35		mg/kg	12.20.18 00:00	
m,p-Xylenes	<0.00102	0.200	0.157	79	0.151	76	70-130	4	35		mg/kg	12.20.18 00:00	
o-Xylene	<0.000345	0.100	0.0783	78	0.0754	75	70-130	4	35		mg/kg	12.20.18 00:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		103		101		70-130	%	12.20.18 00:00
4-Bromofluorobenzene	76		84		83		70-130	%	12.20.18 00:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3073589

Parent Sample Id: 609031-001

Matrix: Soil  
MS Sample Id: 609031-001 S

Prep Method: SW5030B

Date Prep: 12.19.18

MSD Sample Id: 609031-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0574	58	0.0549	55	70-130	4	35		mg/kg	12.20.18 12:15	X
Toluene	<0.000453	0.0994	0.0492	49	0.0431	43	70-130	13	35		mg/kg	12.20.18 12:15	X
Ethylbenzene	<0.000561	0.0994	0.0520	52	0.0484	48	70-130	7	35		mg/kg	12.20.18 12:15	X
m,p-Xylenes	<0.00101	0.199	0.0960	48	0.0891	45	70-130	7	35		mg/kg	12.20.18 12:15	X
o-Xylene	<0.000342	0.0994	0.0544	55	0.0538	54	70-130	1	35		mg/kg	12.20.18 12:15	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	12.20.18 12:15
4-Bromofluorobenzene	85		87		70-130	%	12.20.18 12:15

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

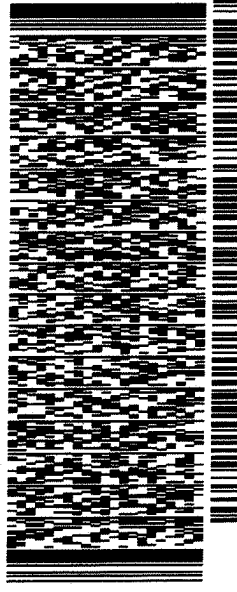


ORIGIN ID:CAOA (575) 887-6245  
 XENCO  
 PAC N MAIL  
 910 W PIERCE ST  
 CARLSBAD, NM 88220  
 UNITED STATES US

SHIP DATE: 18DEC18  
 ACT WGT: 34.00 LB  
 CAD: 101813705NET4040  
 DIMS: 18x12x15 IN  
 BILL RECIPIENT

TO HOLD FOR XENCO  
 FEDEX EXPRESS SHIP CENTER  
 FEDEX SHIP CENTER  
 3600 COUNTY RD 1276 S

MIDLAND TX 79711  
 (806) 794-1296 REF:  
 NV/ PO DEPT:

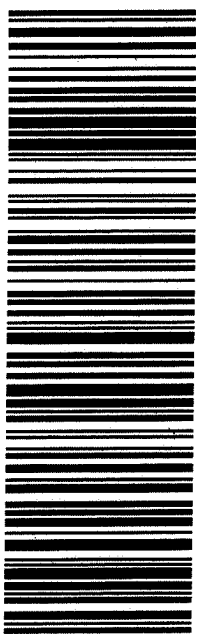


TRK# 7740 1246 2162  
 0201

WED - 19 DEC HOLD  
 STANDARD OVERNIGHT  
 HLD

41 MAFA

MAFA  
 LBB  
 TX:US



552J2/E4AF/DCA5

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# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



**Client:** LT Environmental, Inc.

**Date/ Time Received:** 12/19/2018 10:30:00 AM

**Work Order #:** 609172

**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)?	1.7
#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)?	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:**   
 Katie Lowe

Date: 12/19/2018

**Checklist reviewed by:**   
 Jessica Kramer

Date: 12/19/2018

# Analytical Report 609695

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**BEU Hackberry 34 Battery**

**02-JAN-19**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), 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 (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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)



02-JAN-19

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

Reference: XENCO Report No(s): **609695**  
**BEU Hackberry 34 Battery**  
Project Address: Eddy County

**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) 609695. 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. 609695 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**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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





# Sample Cross Reference 609695



## LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-19-18 14:30	2.5 ft	609695-001
FS02	S	12-19-18 15:20	4 ft	609695-002
SW01	S	12-19-18 14:50	1 ft	609695-003
SW02	S	12-19-18 15:50	2.5 ft	609695-004



## CASE NARRATIVE

*Client Name: LT Environmental, Inc.*

*Project Name: BEU Hackberry 34 Battery*

Project ID:  
Work Order Number(s): 609695

Report Date: 02-JAN-19  
Date Received: 12/22/2018

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3074107 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 609695



**LT Environmental, Inc., Arvada, CO**

**Project Name: BEU Hackberry 34 Battery**

**Project Id:**  
**Contact:** Adrian Baker  
**Project Location:** Eddy County

**Date Received in Lab:** Sat Dec-22-18 01:15 pm  
**Report Date:** 02-JAN-19  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	609695-001	609695-002	609695-003	609695-004		
	<i>Field Id:</i>	FS01	FS02	SW01	SW02		
	<i>Depth:</i>	2.5- ft	4- ft	1- ft	2.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-19-18 14:30	Dec-19-18 15:20	Dec-19-18 14:50	Dec-19-18 15:50		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-26-18 15:00	Dec-26-18 15:00	Dec-26-18 15:00	Dec-26-18 15:00		
	<i>Analyzed:</i>	Dec-27-18 16:03	Dec-27-18 16:22	Dec-27-18 17:02	Dec-27-18 17:21		
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL	mg/kg    RL		
Benzene		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
Toluene		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
Ethylbenzene		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
m,p-Xylenes		<0.00401    0.00401	<0.00399    0.00399	<0.00400    0.00400	<0.00403    0.00403		
o-Xylene		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
Total Xylenes		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
Total BTEX		<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200	<0.00200    0.00200		
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>	Dec-28-18 18:00	Dec-28-18 18:00	Dec-28-18 18:00	Dec-28-18 18:00		
	<i>Analyzed:</i>	Dec-29-18 05:09	Dec-29-18 05:15	Dec-29-18 05:21	Dec-29-18 05:28		
	<i>Units/RL:</i>	mg/kg    RL	mg/kg    RL	mg/kg    RL	mg/kg    RL		
Chloride		29.2    4.95	12.5    4.98	876    4.98	11.4    4.99		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-31-18 11:00	Dec-31-18 11:00	Dec-31-18 11:00	Dec-31-18 11:00		
	<i>Analyzed:</i>	Dec-31-18 21:06	Dec-31-18 21:26	Dec-31-18 21:47	Dec-31-18 22:07		
	<i>Units/RL:</i>	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		
Diesel Range Organics (DRO)		<15.0    15.0	19.6    15.0	<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	<15.0    15.0		
Total TPH		<15.0    15.0	19.6    15.0	<15.0    15.0	<15.0    15.0		

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

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

*Jessica Kramer*

Jessica Kramer  
Project Assistant

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>FS01</b>	Matrix: Soil	Date Received: 12.22.18 13.15
Lab Sample Id: 609695-001	Date Collected: 12.19.18 14.30	Sample Depth: 2.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: OJS	Date Prep: 12.28.18 18.00	Basis: Wet Weight
Seq Number: 3074480		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.2	4.95	mg/kg	12.29.18 05.09		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 12.31.18 11.00
Seq Number: 3074476	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.31.18 21.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.31.18 21.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.31.18 21.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.31.18 21.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.31.18 21.06	
o-Terphenyl	84-15-1	102	%	70-135	12.31.18 21.06	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **FS01**  
 Lab Sample Id: 609695-001

Matrix: Soil  
 Date Collected: 12.19.18 14.30

Date Received: 12.22.18 13.15  
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3074107

Date Prep: 12.26.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.27.18 16.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.27.18 16.03	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	95		%	70-130	12.27.18 16.03	
1,4-Difluorobenzene	540-36-3	111		%	70-130	12.27.18 16.03	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>FS02</b>	Matrix: Soil	Date Received: 12.22.18 13.15
Lab Sample Id: 609695-002	Date Collected: 12.19.18 15.20	Sample Depth: 4 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: OJS	Date Prep: 12.28.18 18.00	Basis: Wet Weight
Seq Number: 3074480		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.5	4.98	mg/kg	12.29.18 05.15		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 12.31.18 11.00
Seq Number: 3074476	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.31.18 21.26	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>19.6</b>	15.0	mg/kg	12.31.18 21.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.31.18 21.26	U	1
<b>Total TPH</b>	PHC635	<b>19.6</b>	15.0	mg/kg	12.31.18 21.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.31.18 21.26	
o-Terphenyl	84-15-1	105	%	70-135	12.31.18 21.26	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **FS02**  
 Lab Sample Id: 609695-002

Matrix: Soil  
 Date Collected: 12.19.18 15.20

Date Received: 12.22.18 13.15  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.26.18 15.00

Basis: Wet Weight

Seq Number: 3074107

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.27.18 16.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.27.18 16.22	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.27.18 16.22		
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.27.18 16.22		

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SW01</b>	Matrix: Soil	Date Received: 12.22.18 13.15
Lab Sample Id: 609695-003	Date Collected: 12.19.18 14.50	Sample Depth: 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: OJS	Date Prep: 12.28.18 18.00	Basis: Wet Weight
Seq Number: 3074480		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>876</b>	4.98	mg/kg	12.29.18 05.21		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 12.31.18 11.00
Seq Number: 3074476	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.31.18 21.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.31.18 21.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.31.18 21.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.31.18 21.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.31.18 21.47	
o-Terphenyl	84-15-1	113	%	70-135	12.31.18 21.47	



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **SW01**  
 Lab Sample Id: 609695-003

Matrix: Soil  
 Date Collected: 12.19.18 14.50

Date Received: 12.22.18 13.15  
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 12.26.18 15.00

Basis: Wet Weight

Seq Number: 3074107

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.27.18 17.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.27.18 17.02	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.27.18 17.02		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.27.18 17.02		



# Certificate of Analytical Results 609695



## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: <b>SW02</b>	Matrix: Soil	Date Received: 12.22.18 13.15
Lab Sample Id: 609695-004	Date Collected: 12.19.18 15.50	Sample Depth: 2.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: OJS		% Moisture:
Analyst: OJS	Date Prep: 12.28.18 18.00	Basis: Wet Weight
Seq Number: 3074480		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	4.99	mg/kg	12.29.18 05.28		1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 12.31.18 11.00
Seq Number: 3074476	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.31.18 22.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.31.18 22.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.31.18 22.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.31.18 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.31.18 22.07	
o-Terphenyl	84-15-1	104	%	70-135	12.31.18 22.07	

## LT Environmental, Inc., Arvada, CO

### BEU Hackberry 34 Battery

Sample Id: **SW02**  
 Lab Sample Id: 609695-004

Matrix: Soil  
 Date Collected: 12.19.18 15.50

Date Received: 12.22.18 13.15  
 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3074107

Date Prep: 12.26.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.27.18 17.21	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.27.18 17.21	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	99		%	70-130	12.27.18 17.21	
1,4-Difluorobenzene	540-36-3	107		%	70-130	12.27.18 17.21	

- 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      **SQL** Sample 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 609695

**LT Environmental, Inc.**  
BEU Hackberry 34 Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3074480  
MB Sample Id: 7668969-1-BLK

Matrix: Solid  
LCS Sample Id: 7668969-1-BKS

Prep Method: E300P  
Date Prep: 12.28.18  
LCSD Sample Id: 7668969-1-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	273	109	273	109	90-110	0	20	mg/kg	12.29.18 02:28	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3074480  
Parent Sample Id: 609587-026

Matrix: Soil  
MS Sample Id: 609587-026 S

Prep Method: E300P  
Date Prep: 12.28.18  
MSD Sample Id: 609587-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.2	248	285	110	281	109	90-110	1	20	mg/kg	12.29.18 02:47	

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3074480  
Parent Sample Id: 609587-035

Matrix: Soil  
MS Sample Id: 609587-035 S

Prep Method: E300P  
Date Prep: 12.28.18  
MSD Sample Id: 609587-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.7	248	312	113	253	89	90-110	21	20	mg/kg	12.29.18 04:17	XF

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3074476  
MB Sample Id: 7669016-1-BLK

Matrix: Solid  
LCS Sample Id: 7669016-1-BKS

Prep Method: TX1005P  
Date Prep: 12.31.18  
LCSD Sample Id: 7669016-1-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)	<7.99	999	861	86	884	88	70-135	3	20	mg/kg	12.31.18 13:45	
Diesel Range Organics (DRO)	<8.12	999	971	97	984	98	70-135	1	20	mg/kg	12.31.18 13:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		125		133		70-135	%	12.31.18 13:45
o-Terphenyl	100		112		112		70-135	%	12.31.18 13:45

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 609695

**LT Environmental, Inc.**  
BEU Hackberry 34 Battery

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3074476  
Parent Sample Id: 609634-001

Matrix: Soil  
MS Sample Id: 609634-001 S

Prep Method: TX1005P  
Date Prep: 12.31.18  
MSD Sample Id: 609634-001 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)	<7.98	997	908	91	895	90	70-135	1	20	mg/kg	12.31.18 14:26	
Diesel Range Organics (DRO)	<8.10	997	1030	103	1020	102	70-135	1	20	mg/kg	12.31.18 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		129		70-135	%	12.31.18 14:26
o-Terphenyl	121		118		70-135	%	12.31.18 14:26

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

Seq Number: 3074107  
MB Sample Id: 7668790-1-BLK

Matrix: Solid  
LCS Sample Id: 7668790-1-BKS

Prep Method: SW5030B  
Date Prep: 12.26.18  
LCSD Sample Id: 7668790-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.113	113	0.104	104	70-130	8	35	mg/kg	12.27.18 09:27	
Toluene	<0.000456	0.100	0.0947	95	0.0905	91	70-130	5	35	mg/kg	12.27.18 09:27	
Ethylbenzene	<0.000565	0.100	0.0991	99	0.0952	95	70-130	4	35	mg/kg	12.27.18 09:27	
m,p-Xylenes	<0.00101	0.200	0.179	90	0.173	87	70-130	3	35	mg/kg	12.27.18 09:27	
o-Xylene	<0.000344	0.100	0.0885	89	0.0865	87	70-130	2	35	mg/kg	12.27.18 09:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		107		106		70-130	%	12.27.18 09:27
4-Bromofluorobenzene	79		85		88		70-130	%	12.27.18 09:27

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

Seq Number: 3074107  
Parent Sample Id: 609206-043

Matrix: Soil  
MS Sample Id: 609206-043 S

Prep Method: SW5030B  
Date Prep: 12.26.18  
MSD Sample Id: 609206-043 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0903	90	0.0986	98	70-130	9	35	mg/kg	12.27.18 10:05	
Toluene	<0.000457	0.100	0.0800	80	0.0854	85	70-130	7	35	mg/kg	12.27.18 10:05	
Ethylbenzene	<0.000566	0.100	0.0847	85	0.0902	89	70-130	6	35	mg/kg	12.27.18 10:05	
m,p-Xylenes	<0.00102	0.200	0.154	77	0.164	81	70-130	6	35	mg/kg	12.27.18 10:05	
o-Xylene	<0.000345	0.100	0.0765	77	0.0802	79	70-130	5	35	mg/kg	12.27.18 10:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	12.27.18 10:05
4-Bromofluorobenzene	88		88		70-130	%	12.27.18 10:05

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



Setting the Standard since 1990  
 Stafford, Texas (281-240-4200)  
 Dallas Texas (214-902-0300)

# CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)  
 Midland, Texas (432-704-5251)

Phoenix, Arizona (480-366-0900)

WWW.XENCO.COM

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: <b>Perliman Office</b> Company Address: <b>71 Fairway Blvd, Inc. M. Hwy 7X</b> <b>300 N. 1st St. Building Unit 103 M. Hwy 7X 74702</b> Email: <b>gaberg@stew.com</b> Phone No: <b>(432) 704-5178</b> Project Contact: <b>Adrian Baker</b> Sampler's Name: <b>Anna Rogers</b>		Project Name/Number: <b>BELU Hochberg/Battery</b> Project Location: <b>Eddy County</b> Invoice To: <b>KTD: Kyle Littrell</b>		Xenco Quote # Xenco Job #		Matrix Codes <b>10091095</b>									
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	CI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	ESD1	2.5'	12/19	14:30	S	1									Composite sample
2	ESD2	4'		15:20	S	1									Composite sample
3	SWD1	1'		14:50	S	1									Composite sample *
4	SWD2	2.5'		15:50	S	1									Composite sample *
5															* average depth
6															
7															
8															
9															
10															
<input type="checkbox"/> Same Day TAT <input checked="" type="checkbox"/> 5 Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT <input type="checkbox"/> 3 Day EMERGENCY		TAT Starts Day received by Lab, if received by 5:00 pm SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY		Data Deliverable Information <input type="checkbox"/> Level II Std GC <input type="checkbox"/> Level III Std GC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Checklist <input type="checkbox"/> Level IV (Full Data Pkg / raw data) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG -411		Notes:		Analytical Information <b>BTEX (only BTEX) 8021</b> <b>TPH/DRO GKO MPO) 8015</b> <b>chlomide (300.00)</b>		Matrix Codes <b>10091095</b>		Field Comments <b>Composite sample</b> <b>Composite sample</b> <b>Composite sample *</b> <b>Composite sample *</b> <b>* average depth</b>			
Refiniquished by Sampler: <b>Anna Rogers</b> Date Time: <b>12/19/18 1820</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>		Refiniquished by: <b>[Signature]</b> Date Time: <b>12/19/18 15:50</b> Refiniquished By: <b>[Signature]</b>	

Notice: 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 services. 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:** 12/22/2018 01:15:00 PM

**Work Order #:** 609695

**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: 12/26/2018  
Brianna Teel


**Checklist reviewed by:** Jessica Kramer Date: 12/26/2018  
Jessica Kramer








**View west of bermed process equipment area**

Project: 012918169	XTO Energy, Inc. BEU Hackberry 34 Federal Battery #1	 <i>Advancing Opportunity</i>
December 13, 2018	Photographic Log	




**View south of excavation around surface lines within both release areas (2RP-4399 and 2RP-5026)**

Project: 012918169	XTO Energy, Inc. BEU Hackberry 34 Federal Battery #1	 <i>Advancing Opportunity</i>
December 17, 2018	Photographic Log	



**View northeast of excavation within both release areas (2RP-4399 and 2RP-5026)**

Project: 012918169	XTO Energy, Inc. BEU Hackberry 34 Federal Battery #1	 <i>Advancing Opportunity</i>
December 21, 2018	Photographic Log	