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

March 25, 2019

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

RE: Closure Request
Poker Lake Unit Big Sinks 22 Battery
Remediation Permit Number 2RP-5182
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing excavation of impacted soil and confirmation soil sampling activities at the Poker Lake Unit Big Sinks 22 Battery (Site) located in Unit P, Section 22, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation and soil sampling activities was to address impacts to soil after a release of crude oil and produced water at the Site.

On December 25, 2018, a corrosion hole was discovered in the salt water disposal (SWD) riser. Approximately of 1.2 barrels (bbls) of crude oil and 59.4 bbls of produced water were released onto the surface of the well pad and into pasture area south of the pad. Approximately 3,200 square feet of well pad surrounding the tank battery containment in the southwest corner of the pad and pasture area south of the pad were affected by the release. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on January 8, 2019, and was assigned Remediation Permit (RP) Number 2RP-5182 (Attachment 1). Based on the excavation activities and results of the confirmation soil sampling events, XTO is requesting no further action for this release.

BACKGROUND

The release occurred after August 14, 2018; therefore, LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321203103511801, located approximately 0.48 miles northeast of the Site. The water well has a depth to groundwater of 423 feet and a total depth of 474 feet. The water well is approximately 30 feet higher in elevation than the Site. The nearest continuously flowing water or significant watercourse is an unnamed dry wash located 0.65 miles

west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride. A closure criteria of 600 mg/kg chloride was applied to the undeveloped pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

PRELIMINARY SOIL SAMPLING ACTIVITIES

On December 28, 2018, LTE personnel inspected the Site to evaluate the release extent. Surface hydrocarbon staining was observed in the release area on the well pad and in the pasture area south of the pad. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected seven preliminary soil samples (SS01 through SS07) within the release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chloride using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for soil sample SS01 indicated that GRO/DRO concentrations exceeded the NMOCD Table 1 closure criteria. Laboratory analytical results for soil samples SS02 through SS04 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results for soil samples SS05 through SS07 indicated that chloride concentrations exceeded the NMOCD Table 1 closure criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1 and the laboratory analytical report is included in Attachment 2. Based on the SS01 and SS05 through SS07 soil sample analytical results, excavation of impacted soil was required.

DELINEATION SOIL SAMPLING ACTIVITIES

During March 2019, LTE personnel returned to the Site to delineate the vertical extent of impacted soil via potholing. On March 14, 2019, potholes were advanced by backhoe and hand auger to a depth of 4 feet bgs at three of the preliminary soil sample locations (SS02 through SS04) to confirm that no impacted soil was present in these areas. Soil was field screened in the

potholes for volatile aromatic hydrocarbons and chloride using a PID and Hach® chloride QuanTab® test strips. Soil samples SS02A, SS03A, and SS04A were collected for laboratory analysis from a depth of 4 feet bgs from the preliminary SS02, SS03, and SS04 soil sample locations.

On March 15, 2019, one pothole (PH01) was advanced to a depth of 8.5 feet bgs in the release area using a backhoe. One soil sample was collected for laboratory analysis from a depth of 8.5 feet bgs.

The pothole soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The pothole soil sample locations and depths are presented on Figure 2 and soil sample logs are included as Attachment 3.

Laboratory analytical results for pothole soil samples SS02A through SS04A and PH01 confirmed that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and no excavation was required in these areas. Laboratory analytical results are presented on Figure 2 and summarized in Table 1.

EXCAVATION SOIL SAMPLING ACTIVITIES

On March 15, 2019, LTE personnel was on site to oversee excavation of impacted soil as indicated by laboratory analytical results for preliminary soil samples SS01 and SS05 through SS07. To direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated to a depth of 1 foot bgs in the area around preliminary soil sample SS01. Following removal of impacted soil, LTE collected 5-point composite soil samples from the sidewalls and floor 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 thoroughly mixing. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation from depths of 0 to 1 foot bgs. Composite soil sample FS01 was collected from the floor of the excavation from a depth of 1 foot bgs.

Impacted soil was excavated in the pasture area south of the well pad around preliminary soil samples SS05 through SS07. Impacted soil was excavated to depths ranging from 3 feet to 4.5 feet bgs, with the deeper area in the southern portion of the excavation and the shallower area in the northern portion. Following removal of impacted soil, LTE collected 5-point composite soil samples from the sidewalls and floor of the excavation. Composite soil samples SW05 through SW09 were collected from the sidewalls of the excavation from depths of 0 to 3 feet bgs or 0 to 4.5 feet bgs. Composite soil samples FS02 through FS06 were collected from the floor of the excavation from depths of 3 feet or 4.5 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas.

The excavations measured a total of 170 square feet in area. The soil sample locations and horizontal extent of the excavations are presented on Figure 3. Approximately 6 cubic yards of impacted soil were removed from the smaller excavation, and approximately 155 cubic yards of impacted soil were removed from the larger excavation, totaling approximately 161 cubic yards. The impacted soil will be transported and properly disposed of at the Lea Land Landfill Facility, in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that GRO/DRO or chloride concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 and SS05 through SS07. Impacted soil was excavated from these areas and subsequent soil samples FS01 through FS06 and SW01 through SW09 collected from the floors and sidewalls of the final excavation extents indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Additionally, confirmation soil samples indicate all soil from ground surface to 4 feet bgs that exceeded 600 mg/kg chloride concentration has been removed.

CONCLUSIONS

The impacted soil was excavated from the release area and laboratory analytical results for the confirmation soil samples collected from the final excavation extents indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and any soil containing greater than 600 mg/kg has been removed from the top 4 feet of the subsurface. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release number 2RP-5182. Upon approval of the no further action request, XTO will backfill the excavation with material purchased locally, recontour the Site to match pre-existing conditions, and reseed the off-pad disturbed area with Bureau of Land Management (BLM) seed mixture #2. An updated NMOCD Form C-141 is included in Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Robert Hamlet, NMOCD
Jim Amos, BLM
Crystal Weaver, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5182)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sample Logs
Attachment 4	Photographic Log

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-5182

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT BIG SINKS 22 BATTERY
UNIT P SEC 22 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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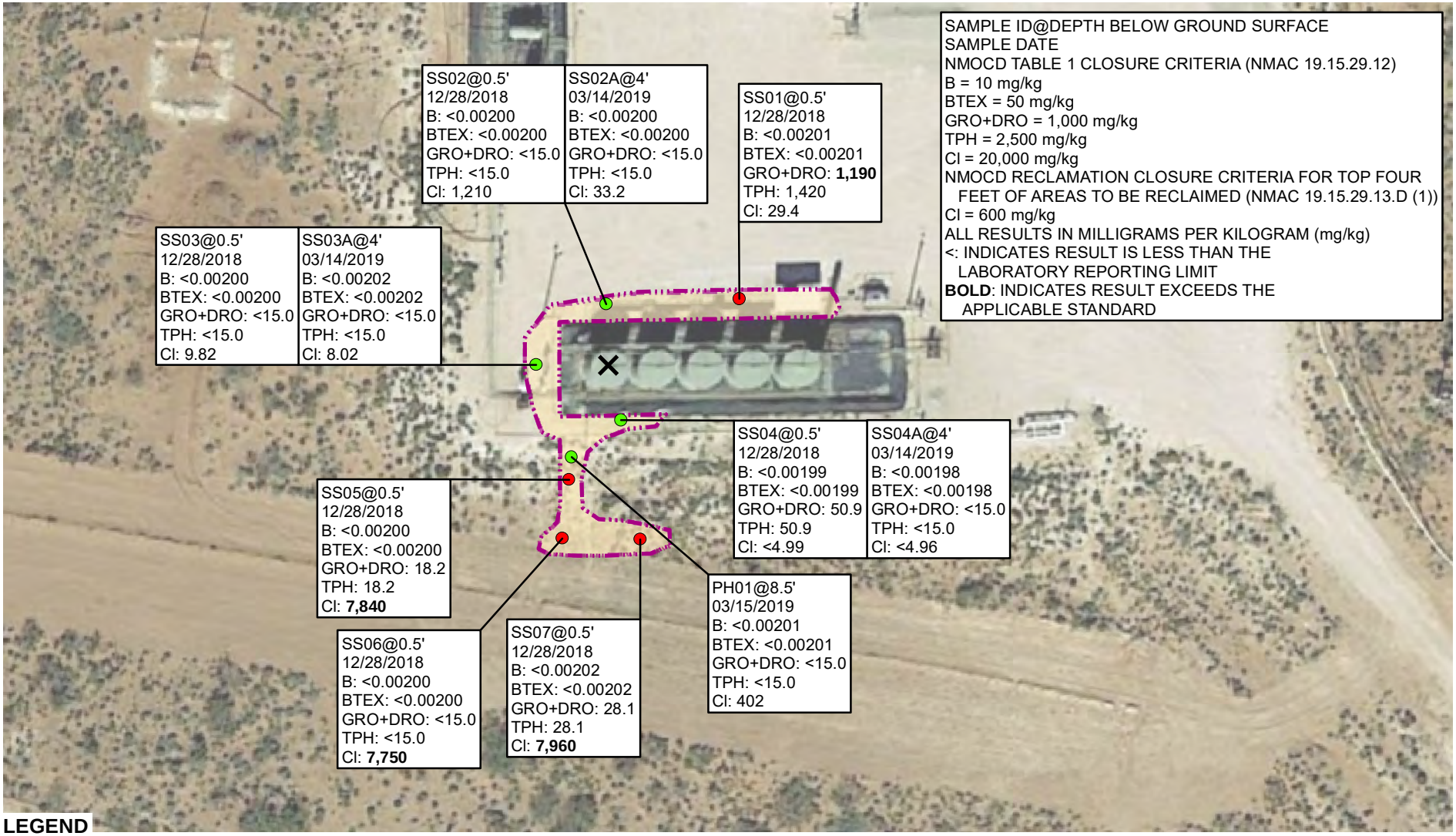

LEGEND

- RELEASE LOCATION
- SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- RELEASE EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 2RP-5182

FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT BIG SINKS 22 BATTERY
UNIT P SEC 22 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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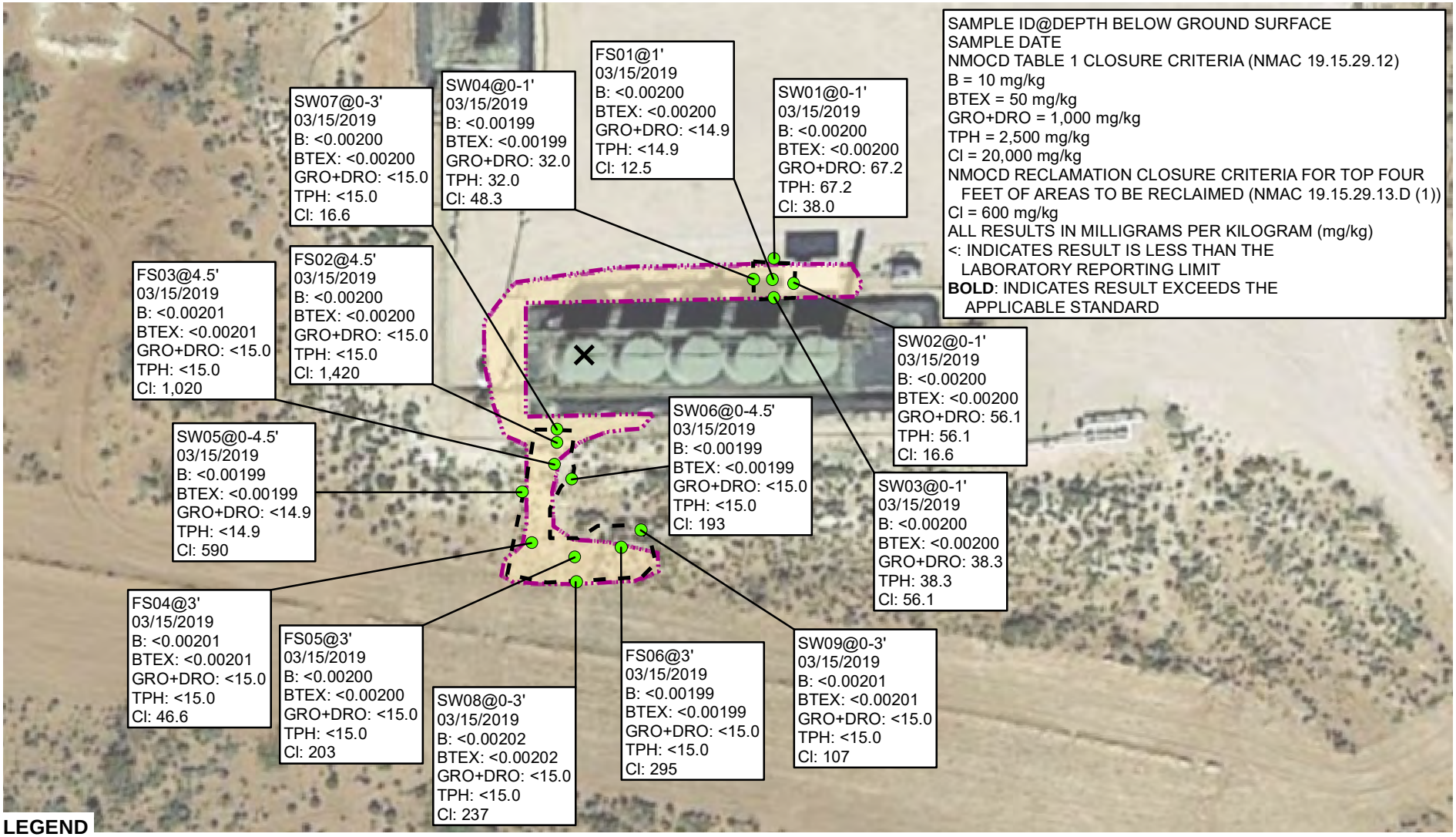

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- RELEASE EXTENT
- EXCAVATION EXTENT

0 50 100
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 2RP-5182

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT BIG SINKS 22 BATTERY
UNIT P SEC 22 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT BIG SINKS 22 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5182
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	12/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	1,190	226	**1,190**	1,420	29.4
SS02	0.5	12/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,210
SS03	0.5	12/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9.82
SS04	0.5	12/28/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	50.9	<15.0	50.9	50.9	<4.99
SS05	0.5	12/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	18.2	<15.0	18.2	18.2	**7,840***
SS06	0.5	12/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**7,750***
SS07	0.5	12/28/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	28.1	<15.0	<15.0	28.1	28.1	**7,960***
SS02A	4	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	33.2
SS03A	4	03/14/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	8.02
SS04A	4	03/14/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
FS01	1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	12.5
FS02	4.5	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,420
FS03	4.5	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,020
FS04	3	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	46.6*
FS05	3	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	203*
FS06	3	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	295*
PH01	8.5	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	402
SW01	0 - 1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	67.2	<15.0	67.2	67.2	38.0
SW02	0 - 1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	56.1	<14.9	56.1	56.1	16.6
SW03	0 - 1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	38.3	<14.9	38.3	38.3	56.1
SW04	0 - 1	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	32.0	<15.0	32.0	32.0	48.3
SW05	0 - 4.5	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	590*
SW06	0 - 4.5	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	193*
SW07	0 - 3	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	16.6*
SW08	0 - 3	03/15/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	237*
SW09	0 - 3	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	107*
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
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
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NMAC - New Mexico Administrative Code

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	NAB1901654690
District RP	2 2RP-5182
Facility ID	
Application ID	pAB1901654302

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)* NAB1901654690
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.196156° Longitude -103.861960°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit Big Sinks 22 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 12/25/2018	API# *(if applicable)* 30-015-37838

Unit Letter	Section	Township	Range	County
P	22	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 1.2	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 59.4	Volume Recovered (bbls) 0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Fluid was released to the soil south of the battery containment from a hole in the SWD riser developed from corrosion. An environmental contractor was retained to assist with the remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1901654690
District RP	2 2RP-5182
Facility ID	
Application ID	pAB1901654302

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume 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)? Notice provided by Kyle Littrell to Mike Bratcher and Jim Griswold (NMOCD), Shelly Tucker and Jim Amos (BLM) on 12/25/2018 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

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Coordinator
Signature: [signature]
Date: 1-8-19
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: [signature]
Date: 1/16/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5182
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5182
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 Supervisor

Signature: Date: 3/25/2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5182
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 3/25/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 610028

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 22 Batt.

RP # Not Assigned

09-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)

09-JAN-19

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

Reference: XENCO Report No(s): **610028**
PLU Big Sinks 22 Batt.
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) 610028. 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. 610028 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	12-28-18 10:05	0.5 ft	610028-001
SS02	S	12-28-18 10:10	0.5 ft	610028-002
SS03	S	12-28-18 10:15	0.5 ft	610028-003
SS04	S	12-28-18 10:20	0.5 ft	610028-004
SS05	S	12-28-18 10:30	0.5 ft	610028-005
SS06	S	12-28-18 10:35	0.5 ft	610028-006
SS07	S	12-28-18 10:40	0.5 ft	610028-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3074886 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3075213 Inorganic Anions by EPA 300
Lab Sample ID 610511-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 610028-001, -002, -003, -004, -005, -006, -007.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3075245 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 610028-002.

Certificate of Analysis Summary 610028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 22 Batt.

Project Id: RP # Not Assigned
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Dec-29-18 12:30 pm
Report Date: 09-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	610028-001		610028-002		610028-003		610028-004		610028-005		610028-006	
	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-18 10:05		Dec-28-18 10:10		Dec-28-18 10:15		Dec-28-18 10:20		Dec-28-18 10:30		Dec-28-18 10:35	
BTEX by EPA 8021B	***Extracted:***	Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15	
	Analyzed:	Jan-04-19 12:17		Jan-04-19 12:36		Jan-04-19 12:55		Jan-04-19 13:14		Jan-04-19 15:44		Jan-04-19 16:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400	<0.00401	0.00401
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Jan-08-19 13:00		Jan-08-19 13:00		Jan-08-19 13:00		Jan-08-19 13:00		Jan-08-19 13:00		Jan-08-19 13:00	
	Analyzed:	Jan-09-19 10:55		Jan-09-19 11:02		Jan-09-19 11:20		Jan-09-19 11:26		Jan-09-19 11:48		Jan-09-19 11:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		29.4	4.99	1210	4.99	9.82	4.95	<4.99	4.99	7840	49.6	7750	49.8
TPH by SW8015 Mod	***Extracted:***	Jan-06-19 13:00		Jan-06-19 13:00		Jan-06-19 13:00		Jan-06-19 13:00		Jan-06-19 13:00		Jan-06-19 13:00	
	Analyzed:	Jan-09-19 01:48		Jan-08-19 22:10		Jan-09-19 01:28		Jan-09-19 02:48		Jan-09-19 03:08		Jan-09-19 03:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		1190	15.0	<15.0	15.0	<15.0	15.0	50.9	15.0	18.2	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		226	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		1420	15.0	<15.0	15.0	<15.0	15.0	50.9	15.0	18.2	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 610028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 22 Batt.

Project Id: RP # Not Assigned
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Dec-29-18 12:30 pm
Report Date: 09-JAN-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	610028-007					
	Field Id:	SS07					
	Depth:	0.5- ft					
	Matrix:	SOIL					
	Sampled:	Dec-28-18 10:40					
BTEX by EPA 8021B	***Extracted:***	Jan-04-19 08:15					
	Analyzed:	Jan-04-19 16:41					
	Units/RL:	mg/kg	RL				
Benzene		<0.00202	0.00202				
Toluene		<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202				
m,p-Xylenes		<0.00403	0.00403				
o-Xylene		<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202				
Total BTEX		<0.00202	0.00202				
Inorganic Anions by EPA 300	***Extracted:***	Jan-08-19 13:00					
	Analyzed:	Jan-09-19 12:00					
	Units/RL:	mg/kg	RL				
Chloride		7960	49.8				
TPH by SW8015 Mod	***Extracted:***	Jan-06-19 13:00					
	Analyzed:	Jan-09-19 03:47					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		28.1	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		28.1	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-001	Date Collected:	12.28.18 10.05	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.4**	4.99	mg/kg	01.09.19 10.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 01.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1190**	15.0	mg/kg	01.09.19 01.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**226**	15.0	mg/kg	01.09.19 01.48		1
Total TPH	PHC635	**1420**	15.0	mg/kg	01.09.19 01.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.09.19 01.48	
o-Terphenyl	84-15-1	91	%	70-135	01.09.19 01.48	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-001	Date Collected:	12.28.18 10.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.04.19 12.17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.04.19 12.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.04.19 12.17	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.04.19 12.17	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-002	Date Collected:	12.28.18 10.10	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1210**	4.99	mg/kg	01.09.19 11.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.08.19 22.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.08.19 22.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.08.19 22.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.08.19 22.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	170	%	70-135	01.08.19 22.10	**
o-Terphenyl	84-15-1	170	%	70-135	01.08.19 22.10	**

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-002	Date Collected:	12.28.18 10.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.04.19 12.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.04.19 12.36	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.04.19 12.36	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-003	Date Collected:	12.28.18 10.15	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.82**	4.95	mg/kg	01.09.19 11.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 01.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 01.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 01.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 01.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	01.09.19 01.28	
o-Terphenyl	84-15-1	90	%	70-135	01.09.19 01.28	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-003	Date Collected:	12.28.18 10.15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.04.19 12.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 12.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.04.19 12.55	
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.04.19 12.55	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-004	Date Collected:	12.28.18 10.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.09.19 11.26	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 02.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**50.9**	15.0	mg/kg	01.09.19 02.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 02.48	U	1
Total TPH	PHC635	**50.9**	15.0	mg/kg	01.09.19 02.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.09.19 02.48	
o-Terphenyl	84-15-1	85	%	70-135	01.09.19 02.48	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-004	Date Collected:	12.28.18 10.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.04.19 13.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.04.19 13.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.04.19 13.14	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.04.19 13.14	

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-005	Date Collected:	12.28.18 10.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7840**	49.6	mg/kg	01.09.19 11.48		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 03.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.2**	15.0	mg/kg	01.09.19 03.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 03.08	U	1
Total TPH	PHC635	**18.2**	15.0	mg/kg	01.09.19 03.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	01.09.19 03.08	
o-Terphenyl	84-15-1	82	%	70-135	01.09.19 03.08	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-005	Date Collected:	12.28.18 10.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.04.19 15.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.04.19 15.44	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.04.19 15.44	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-006	Date Collected:	12.28.18 10.35	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7750**	49.8	mg/kg	01.09.19 11.54		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.19 03.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 03.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 03.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.09.19 03.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	01.09.19 03.27	
o-Terphenyl	84-15-1	81	%	70-135	01.09.19 03.27	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-006	Date Collected:	12.28.18 10.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.04.19 16.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.04.19 16.22	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.04.19 16.22	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-007	Date Collected:	12.28.18 10.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.08.19 13.00	Basis:	Wet Weight
Seq Number:	3075213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7960**	49.8	mg/kg	01.09.19 12.00		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.06.19 13.00	Basis:	Wet Weight
Seq Number:	3075245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**28.1**	15.0	mg/kg	01.09.19 03.47		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.19 03.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.09.19 03.47	U	1
Total TPH	PHC635	**28.1**	15.0	mg/kg	01.09.19 03.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.09.19 03.47	
o-Terphenyl	84-15-1	89	%	70-135	01.09.19 03.47	

Certificate of Analytical Results 610028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 22 Batt.

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	12.29.18 12.30
Lab Sample Id:	610028-007	Date Collected:	12.28.18 10.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.04.19 16.41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.04.19 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.04.19 16.41	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.04.19 16.41	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 610028

LT Environmental, Inc.

PLU Big Sinks 22 Batt.

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075213 Matrix: Solid Date Prep: 01.08.19
MB Sample Id: 7669392-1-BLK LCS Sample Id: 7669392-1-BKS LCSD Sample Id: 7669392-1-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	227	91	242	97	90-110	6	20	mg/kg	01.09.19 09:20	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075213 Matrix: Soil Date Prep: 01.08.19
Parent Sample Id: 610028-002 MS Sample Id: 610028-002 S MSD Sample Id: 610028-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1210	250	1440	92	1390	72	90-110	4	20	mg/kg	01.09.19 11:08	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075213 Matrix: Soil Date Prep: 01.08.19
Parent Sample Id: 610511-001 MS Sample Id: 610511-001 S MSD Sample Id: 610511-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	249	410	106	411	107	90-110	0	20	mg/kg	01.09.19 09:38	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075245 Matrix: Solid Date Prep: 01.06.19
MB Sample Id: 7669442-1-BLK LCS Sample Id: 7669442-1-BKS LCSD Sample Id: 7669442-1-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	998	812	81	813	81	70-135	0	20	mg/kg	01.08.19 21:30	
Diesel Range Organics (DRO)	<8.11	998	893	89	899	90	70-135	1	20	mg/kg	01.08.19 21:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	133		109		110		70-135	%	01.08.19 21:30
o-Terphenyl	135		105		105		70-135	%	01.08.19 21:30

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

QC Summary 610028

LT Environmental, Inc.

PLU Big Sinks 22 Batt.

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075245 Matrix: Soil Date Prep: 01.06.19
Parent Sample Id: 610028-002 MS Sample Id: 610028-002 S MSD Sample Id: 610028-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	851	85	856	86	70-135	1	20	mg/kg	01.08.19 22:30	
Diesel Range Organics (DRO)	<8.12	999	924	92	936	94	70-135	1	20	mg/kg	01.08.19 22:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		114		70-135	%	01.08.19 22:30
o-Terphenyl	115		110		70-135	%	01.08.19 22:30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3074886 Matrix: Solid Date Prep: 01.04.19
MB Sample Id: 7669221-1-BLK LCS Sample Id: 7669221-1-BKS LCSD Sample Id: 7669221-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.109	110	0.111	111	70-130	2	35	mg/kg	01.04.19 09:47	
Toluene	<0.000453	0.0994	0.104	105	0.104	104	70-130	0	35	mg/kg	01.04.19 09:47	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.103	103	70-130	1	35	mg/kg	01.04.19 09:47	
m,p-Xylenes	<0.00101	0.199	0.207	104	0.205	103	70-130	1	35	mg/kg	01.04.19 09:47	
o-Xylene	<0.000342	0.0994	0.103	104	0.103	103	70-130	0	35	mg/kg	01.04.19 09:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		101		70-130	%	01.04.19 09:47
4-Bromofluorobenzene	90		93		92		70-130	%	01.04.19 09:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3074886 Matrix: Soil Date Prep: 01.04.19
Parent Sample Id: 609961-001 MS Sample Id: 609961-001 S MSD Sample Id: 609961-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.104	104	0.100	100	70-130	4	35	mg/kg	01.04.19 10:25	
Toluene	<0.000455	0.0998	0.0989	99	0.0988	99	70-130	0	35	mg/kg	01.04.19 10:25	
Ethylbenzene	<0.000564	0.0998	0.0975	98	0.0973	97	70-130	0	35	mg/kg	01.04.19 10:25	
m,p-Xylenes	<0.00101	0.200	0.194	97	0.195	98	70-130	1	35	mg/kg	01.04.19 10:25	
o-Xylene	<0.000344	0.0998	0.0967	97	0.0963	96	70-130	0	35	mg/kg	01.04.19 10:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		70-130	%	01.04.19 10:25
4-Bromofluorobenzene	95		98		70-130	%	01.04.19 10:25

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

Chain of Custody

Work Order No: 610028

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	PLU BigSinks 22 Batt.
Project Number:	~~ZAP~~ RP# Not Assigned
P.O. Number:	
Sampler's Name:	Benjamin Belill

Turn Around: Routine ☑ Rush: Due Date:

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.5/2.4	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	12/28/18	1005	0.5'	1	X	X	X
SS02			1010			X	X	X
SS03			1015			X	X	X
SS04			1020			X	X	X
SS05			1030			X	X	X
SS06			1035			X	X	X
SS07			1040			X	X	X
				SS6		12/28/18		

Work Order Notes

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

Sample Comments

Discrete Type

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

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Ben Belill	Jaylo R Lay	12/28/18@13:40	2 Jaylo R Lay	Kati Lee	12/29/18 1230
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

7740 8079 5199

Final 1.000

Page 24 of 25

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

SHIP DATE: 28DEC18
ACTWGT: 13.00 LB
CAD: 101813706/INET4040
DIMS: 13x12x10 IN

BILL RECIPIENT

TO HOLD FOR XENCO

200 W INTERSTATE 20

MIDLAND TX 79701

(806) 674-0639

REF: XENCO

INV:

PO:

DEPT:

552J2/E4AF/DCA5

J182118081501uv

FedEx Express

SATURDAY HOLD

PRIORITY OVERNIGHT

HLD

TRK# 0201 7740 8079 5199

41 MAFA

TX-US LBB 79701

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Analytical Report 617911

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU BS 22 Battery

012918199

21-MAR-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), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

21-MAR-19

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

Reference: XENCO Report No(s): **617911**
PLU BS 22 Battery
Project Address: Delaware Basin

Adrian Baker:

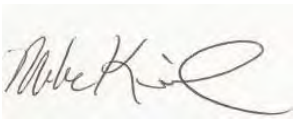
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 617911. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 617911 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,



Mike Kimmel
Client Services Manager

Sample Cross Reference 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS02A	S	03-14-19 10:00	4 ft	617911-001
SS03A	S	03-14-19 10:15	4 ft	617911-002
SS04A	S	03-14-19 10:30	4 ft	617911-003
FS02	S	03-15-19 09:40	4.5 ft	617911-004
FS03	S	03-15-19 09:50	4.5 - 1 ft	617911-005
SW05	S	03-15-19 11:00	0 - 4.5 ft	617911-006
SW06	S	03-15-19 11:45	0 - 4.5 ft	617911-007
FS04	S	03-15-19 14:45	3 ft	617911-008
SW07	S	03-15-19 15:05	0 - 3 ft	617911-009
SW08	S	03-15-19 15:15	0 - 3 ft	617911-010
FS05	S	03-15-19 16:00	3 ft	617911-011
SW09	S	03-15-19 16:20	0 - 3 ft	617911-012
FS06	S	03-15-19 16:25	3 ft	617911-013
SW01	S	03-15-19 16:45	0 - 1 ft	617911-014
SW02	S	03-15-19 16:50	0 - 1 ft	617911-015
SW03	S	03-15-19 17:00	0 - 1 ft	617911-016
SW04	S	03-15-19 17:05	0 - 1 ft	617911-017
FS01	S	03-15-19 17:10	1 ft	617911-018
PH01	S	03-15-19 16:40	8.5 ft	617911-019

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU BS 22 Battery

Project ID: *012918199*
Work Order Number(s): *617911*

Report Date: *21-MAR-19*
Date Received: *03/18/2019*

Sample receipt non conformances and comments:

03/21/19: Revised report with re-run for Chloride on 617911-006. Re-run data reported.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082542 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617911-007.

Batch: LBA-3082546 Inorganic Anions by EPA 300
Lab Sample ID 617911-017 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 617911-007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 617911

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 22 Battery

Project Id: 012918199
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Mar-18-19 09:27 am
Report Date: 21-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617911-001		617911-002		617911-003		617911-004		617911-005		617911-006	
	Field Id:	SS02A		SS03A		SS04A		FS02		FS03		SW05	
	Depth:	4- ft		4- ft		4- ft		4.5- ft		4.5-1 ft		0-4.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-14-19 10:00		Mar-14-19 10:15		Mar-14-19 10:30		Mar-15-19 09:40		Mar-15-19 09:50		Mar-15-19 11:00	
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	Mar-18-19 22:39		Mar-18-19 22:58		Mar-18-19 23:17		Mar-18-19 23:36		Mar-18-19 23:55		Mar-19-19 00:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00403	0.00403	<0.00397	0.00397	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15	
	Analyzed:	Mar-18-19 20:20		Mar-18-19 20:26		Mar-18-19 20:32		Mar-18-19 20:38		Mar-18-19 20:44		Mar-18-19 20:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		33.2	4.95	8.02	5.00	<4.96	4.96	1420	25.0	1020	5.00	590	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00	
	Analyzed:	Mar-19-19 07:00		Mar-19-19 07:58		Mar-19-19 08:18		Mar-19-19 08:38		Mar-19-19 08:58		Mar-19-19 09:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<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		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 617911

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 22 Battery

Project Id: 012918199
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Mar-18-19 09:27 am
Report Date: 21-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617911-007		617911-008		617911-009		617911-010		617911-011		617911-012	
	Field Id:	SW06		FS04		SW07		SW08		FS05		SW09	
	Depth:	0-4.5 ft		3- ft		0-3 ft		0-3 ft		3- ft		0-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 11:45		Mar-15-19 14:45		Mar-15-19 15:05		Mar-15-19 15:15		Mar-15-19 16:00		Mar-15-19 16:20	
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	Mar-19-19 00:33		Mar-19-19 00:52		Mar-19-19 01:11		Mar-19-19 02:25		Mar-19-19 02:44		Mar-19-19 03:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399	<0.00403	0.00403	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00	
	Analyzed:	Mar-18-19 21:33		Mar-18-19 21:51		Mar-18-19 21:57		Mar-18-19 22:03		Mar-18-19 22:09		Mar-18-19 22:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		193	4.95	46.6	4.95	16.6	4.95	237	4.95	203	4.98	107	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00	
	Analyzed:	Mar-19-19 09:37		Mar-19-19 09:57		Mar-19-19 10:17		Mar-19-19 10:37		Mar-19-19 11:36		Mar-19-19 11:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	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	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 617911

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 22 Battery

Project Id: 012918199
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Mar-18-19 09:27 am
Report Date: 21-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617911-013		617911-014		617911-015		617911-016		617911-017		617911-018	
	Field Id:	FS06		SW01		SW02		SW03		SW04		FS01	
	Depth:	3- ft		0-1 ft		0-1 ft		0-1 ft		0-1 ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 16:25		Mar-15-19 16:45		Mar-15-19 16:50		Mar-15-19 17:00		Mar-15-19 17:05		Mar-15-19 17:10	
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	Mar-19-19 03:22		Mar-19-19 03:41		Mar-19-19 04:00		Mar-19-19 04:19		Mar-19-19 04:38		Mar-19-19 04:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00401	0.00401	<0.00400	0.00400	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00		Mar-18-19 13:00	
	Analyzed:	Mar-18-19 22:33		Mar-18-19 22:39		Mar-18-19 22:45		Mar-18-19 22:51		Mar-18-19 22:57		Mar-18-19 23:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		295	5.00	38.0	4.96	16.6	4.99	56.1	4.95	48.3	4.95	12.5	5.04
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00		Mar-18-19 11:00	
	Analyzed:	Mar-19-19 12:15		Mar-19-19 12:35		Mar-19-19 12:54		Mar-19-19 13:14		Mar-19-19 13:34		Mar-19-19 13:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	67.2	15.0	56.1	14.9	38.3	14.9	32.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	67.2	15.0	56.1	14.9	38.3	14.9	32.0	15.0	<14.9	14.9

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 617911

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 22 Battery

Project Id: 012918199
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Mar-18-19 09:27 am
Report Date: 21-MAR-19
Project Manager: Kalei Stout

Analysis Requested							
	Lab Id:	617911-019					
	Field Id:	PH01					
	Depth:	8.5- ft					
	Matrix:	SOIL					
	Sampled:	Mar-15-19 16:40					
BTEX by EPA 8021B	***Extracted:***	** ** ** **					
	Analyzed:	Mar-19-19 05:16					
	Units/RL:	mg/kg RL					
Benzene		<0.00201 0.00201					
Toluene		<0.00201 0.00201					
Ethylbenzene		<0.00201 0.00201					
m,p-Xylenes		<0.00402 0.00402					
o-Xylene		<0.00201 0.00201					
Total Xylenes		<0.00201 0.00201					
Total BTEX		<0.00201 0.00201					
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 13:00					
	Analyzed:	Mar-18-19 23:21					
	Units/RL:	mg/kg RL					
Chloride		402 5.00					
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 11:00					
	Analyzed:	Mar-19-19 14:13					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		<15.0 15.0					

Mike Kimmel
Client Services Manager

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-001	Date Collected:	03.14.19 10.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.2**	4.95	mg/kg	03.18.19 20.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 07.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 07.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 07.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 07.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.19.19 07.00	
o-Terphenyl	84-15-1	102	%	70-135	03.19.19 07.00	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-001	Date Collected:	03.14.19 10.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.18.19 22.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 22.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 22.39	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.18.19 22.39	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-002	Date Collected:	03.14.19 10.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.02**	5.00	mg/kg	03.18.19 20.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 07.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 07.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 07.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 07.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.19.19 07.58	
o-Terphenyl	84-15-1	91	%	70-135	03.19.19 07.58	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-002	Date Collected:	03.14.19 10.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.18.19 22.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.18.19 22.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.18.19 22.58	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.18.19 22.58	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-003	Date Collected:	03.14.19 10.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.18.19 20.32	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 08.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 08.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 08.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 08.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 08.18	
o-Terphenyl	84-15-1	90	%	70-135	03.19.19 08.18	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-003	Date Collected:	03.14.19 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.18.19 23.17	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.18.19 23.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.18.19 23.17	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 23.17	

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LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-004	Date Collected:	03.15.19 09.40	Sample Depth:	4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1420**	25.0	mg/kg	03.18.19 20.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 08.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 08.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 08.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 08.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.19.19 08.38	
o-Terphenyl	84-15-1	89	%	70-135	03.19.19 08.38	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-004	Date Collected:	03.15.19 09.40	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.18.19 23.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 23.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.18.19 23.36	
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.18.19 23.36	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-005	Date Collected:	03.15.19 09.50	Sample Depth:	4.5 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1020**	5.00	mg/kg	03.18.19 20.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 08.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 08.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 08.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 08.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.19.19 08.58	
o-Terphenyl	84-15-1	90	%	70-135	03.19.19 08.58	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-005	Date Collected:	03.15.19 09.50	Sample Depth:	4.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.18.19 23.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.18.19 23.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 23.55	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.18.19 23.55	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-006	Date Collected:	03.15.19 11.00	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**590**	5.00	mg/kg	03.20.19 21.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 09.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.19.19 09.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 09.18	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.19.19 09.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.19.19 09.18	
o-Terphenyl	84-15-1	87	%	70-135	03.19.19 09.18	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-006	Date Collected:	03.15.19 11.00	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 00.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 00.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 00.14	
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.19.19 00.14	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-007	Date Collected:	03.15.19 11.45	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	4.95	mg/kg	03.18.19 21.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 09.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 09.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 09.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 09.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.19.19 09.37	
o-Terphenyl	84-15-1	86	%	70-135	03.19.19 09.37	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-007	Date Collected:	03.15.19 11.45	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 00.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	147	%	70-130	03.19.19 00.33	**
1,4-Difluorobenzene	540-36-3	96	%	70-130	03.19.19 00.33	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-008	Date Collected:	03.15.19 14.45	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.6**	4.95	mg/kg	03.18.19 21.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 09.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 09.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 09.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 09.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.19.19 09.57	
o-Terphenyl	84-15-1	92	%	70-135	03.19.19 09.57	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-008	Date Collected:	03.15.19 14.45	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.19.19 00.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.19.19 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 00.52	
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 00.52	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-009	Date Collected:	03.15.19 15.05	Sample Depth:	0 - 3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.6**	4.95	mg/kg	03.18.19 21.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 10.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 10.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 10.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 10.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.19.19 10.17	
o-Terphenyl	84-15-1	88	%	70-135	03.19.19 10.17	

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LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-009	Date Collected:	03.15.19 15.05	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.19.19 01.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 01.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 01.11	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 01.11	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-010	Date Collected:	03.15.19 15.15	Sample Depth:	0 - 3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	4.95	mg/kg	03.18.19 22.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 10.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 10.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 10.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 10.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.19.19 10.37	
o-Terphenyl	84-15-1	93	%	70-135	03.19.19 10.37	

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LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-010	Date Collected:	03.15.19 15.15	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.19.19 02.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.19.19 02.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 02.25	
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.19.19 02.25	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-011	Date Collected:	03.15.19 16.00	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**203**	4.98	mg/kg	03.18.19 22.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 11.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 11.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 11.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 11.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.19.19 11.36	
o-Terphenyl	84-15-1	94	%	70-135	03.19.19 11.36	

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LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-011	Date Collected:	03.15.19 16.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.19.19 02.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 02.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.19.19 02.44	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 02.44	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-012	Date Collected:	03.15.19 16.20	Sample Depth:	0 - 3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**107**	5.00	mg/kg	03.18.19 22.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 11.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 11.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 11.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 11.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.19.19 11.55	
o-Terphenyl	84-15-1	87	%	70-135	03.19.19 11.55	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-012	Date Collected:	03.15.19 16.20	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.19.19 03.03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.19.19 03.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.19.19 03.03	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 03.03	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-013	Date Collected:	03.15.19 16.25	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**295**	5.00	mg/kg	03.18.19 22.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 12.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 12.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 12.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 12.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.19.19 12.15	
o-Terphenyl	84-15-1	91	%	70-135	03.19.19 12.15	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-013	Date Collected:	03.15.19 16.25	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 03.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 03.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 03.22	
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.19.19 03.22	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-014	Date Collected:	03.15.19 16.45	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.0**	4.96	mg/kg	03.18.19 22.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 12.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**67.2**	15.0	mg/kg	03.19.19 12.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 12.35	U	1
Total TPH	PHC635	**67.2**	15.0	mg/kg	03.19.19 12.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.19.19 12.35	
o-Terphenyl	84-15-1	92	%	70-135	03.19.19 12.35	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-014	Date Collected:	03.15.19 16.45	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.19.19 03.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 03.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 03.41	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.19.19 03.41	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-015	Date Collected:	03.15.19 16.50	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.6**	4.99	mg/kg	03.18.19 22.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**56.1**	14.9	mg/kg	03.19.19 12.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 12.54	U	1
Total TPH	PHC635	**56.1**	14.9	mg/kg	03.19.19 12.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 12.54	
o-Terphenyl	84-15-1	91	%	70-135	03.19.19 12.54	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-015	Date Collected:	03.15.19 16.50	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.19.19 04.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 04.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.19.19 04.00	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 04.00	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-016	Date Collected:	03.15.19 17.00	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.1**	4.95	mg/kg	03.18.19 22.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 13.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.3**	14.9	mg/kg	03.19.19 13.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 13.14	U	1
Total TPH	PHC635	**38.3**	14.9	mg/kg	03.19.19 13.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 13.14	
o-Terphenyl	84-15-1	91	%	70-135	03.19.19 13.14	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-016	Date Collected:	03.15.19 17.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.19.19 04.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 04.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 04.19	
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.19.19 04.19	

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-017	Date Collected:	03.15.19 17.05	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**48.3**	4.95	mg/kg	03.18.19 22.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**32.0**	15.0	mg/kg	03.19.19 13.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 13.34	U	1
Total TPH	PHC635	**32.0**	15.0	mg/kg	03.19.19 13.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.19.19 13.34	
o-Terphenyl	84-15-1	93	%	70-135	03.19.19 13.34	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-017	Date Collected:	03.15.19 17.05	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 04.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 04.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 04.38	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 04.38	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-018	Date Collected:	03.15.19 17.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.5**	5.04	mg/kg	03.18.19 23.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.19.19 13.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 13.53	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.19.19 13.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 13.53	
o-Terphenyl	84-15-1	90	%	70-135	03.19.19 13.53	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-018	Date Collected:	03.15.19 17.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.19.19 04.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 04.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.19.19 04.57	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 04.57	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-019	Date Collected:	03.15.19 16.40	Sample Depth:	8.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 13.00	Basis:	Wet Weight
Seq Number:	3082546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**402**	5.00	mg/kg	03.18.19 23.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 14.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 14.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 14.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 14.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.19.19 14.13	
o-Terphenyl	84-15-1	88	%	70-135	03.19.19 14.13	

Certificate of Analytical Results 617911

LT Environmental, Inc., Arvada, CO

PLU BS 22 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	03.18.19 09.27
Lab Sample Id:	617911-019	Date Collected:	03.15.19 16.40	Sample Depth:	8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.19.19 05.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.19.19 05.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.19.19 05.16	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 05.16	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 617911

LT Environmental, Inc.

PLU BS 22 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673783-1-BLK LCS Sample Id: 7673783-1-BKS LCSD Sample Id: 7673783-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	241	96	242	97	90-110	0	20	mg/kg	03.18.19 21:20	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082541 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617903-006 MS Sample Id: 617903-006 S MSD Sample Id: 617903-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.28	250	243	96	241	95	90-110	1	20	mg/kg	03.18.19 18:19	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082541 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617912-002 MS Sample Id: 617912-002 S MSD Sample Id: 617912-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	251	250	408	63	468	87	90-110	14	20	mg/kg	03.18.19 19:44	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-007 MS Sample Id: 617911-007 S MSD Sample Id: 617911-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	193	248	418	91	414	89	90-110	1	20	mg/kg	03.18.19 21:39	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082546 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-017 MS Sample Id: 617911-017 S MSD Sample Id: 617911-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.3	248	297	100	295	99	90-110	1	20	mg/kg	03.18.19 23:03	

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 617911

LT Environmental, Inc.

PLU BS 22 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082635 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673811-1-BLK LCS Sample Id: 7673811-1-BKS LCSD Sample Id: 7673811-1-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	1040	104	1000	100	70-135	4	20	mg/kg	03.19.19 06:20	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	999	100	70-135	5	20	mg/kg	03.19.19 06:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		118		120		70-135	%	03.19.19 06:20
o-Terphenyl	94		103		104		70-135	%	03.19.19 06:20

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082635 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-001 MS Sample Id: 617911-001 S MSD Sample Id: 617911-001 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	950	95	1030	103	70-135	8	20	mg/kg	03.19.19 07:19	
Diesel Range Organics (DRO)	<8.12	999	953	95	1020	102	70-135	7	20	mg/kg	03.19.19 07:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		120		70-135	%	03.19.19 07:19
o-Terphenyl	96		102		70-135	%	03.19.19 07:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082542 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673822-1-BLK LCS Sample Id: 7673822-1-BKS LCSD Sample Id: 7673822-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.101	102	0.103	103	70-130	2	35	mg/kg	03.18.19 20:28	
Toluene	<0.000453	0.0994	0.108	109	0.111	111	70-130	3	35	mg/kg	03.18.19 20:28	
Ethylbenzene	<0.000561	0.0994	0.0999	101	0.102	102	70-130	2	35	mg/kg	03.18.19 20:28	
m,p-Xylenes	<0.00101	0.199	0.194	97	0.197	99	70-130	2	35	mg/kg	03.18.19 20:28	
o-Xylene	<0.000342	0.0994	0.0999	101	0.102	102	70-130	2	35	mg/kg	03.18.19 20:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		101		70-130	%	03.18.19 20:28
4-Bromofluorobenzene	109		106		107		70-130	%	03.18.19 20:28

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

QC Summary 617911

LT Environmental, Inc.

PLU BS 22 Battery

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

Seq Number: 3082542 Matrix: Soil Date Prep: 03.18.19

Parent Sample Id: 617903-006 MS Sample Id: 617903-006 S MSD Sample Id: 617903-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000461	0.0996	0.0997	100	0.0952	95	70-130	5	35	mg/kg	03.18.19 21:06	
Toluene	0.000681	0.0996	0.107	107	0.101	101	70-130	6	35	mg/kg	03.18.19 21:06	
Ethylbenzene	<0.000563	0.0996	0.0949	95	0.0901	90	70-130	5	35	mg/kg	03.18.19 21:06	
m,p-Xylenes	0.00116	0.199	0.188	94	0.179	89	70-130	5	35	mg/kg	03.18.19 21:06	
o-Xylene	0.000701	0.0996	0.0965	96	0.0916	91	70-130	5	35	mg/kg	03.18.19 21:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	03.18.19 21:06
4-Bromofluorobenzene	108		110		70-130	%	03.18.19 21:06

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

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

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

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 617911

www.xenco.com Page 1 of 3

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 N "A" St.	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com, llaumbach@ltenv.com

Work Order Comments

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

Project Name:	PLU BS 22 Battery	Turn Around	
Project Number:	012918/199	Routine ☐	
P.O. Number:	2RP-5182	Rush: 1DAY	
Sampler's Name:	L. Laumbach	Due Date: 03/19/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.1 | 3.0	Thermometer ID	IR
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS02A	S	03/14/19	10:00	4'	1	X	X	X
SS03A	S	03/14/19	10:15	4'	1	X	X	X
SS04A	S	03/14/19	10:30	4'	1	X	X	X
FS02	S	03/15/19	9:40	4.5'		X	X	X
FS03	S		9:50	4.5'		X	X	X
SW05	S		11:00	0-4.5'		X	X	X
SW06	S		11:45	0-4.5'		X	X	X
~~FS04~~	S		14:45	3'		X	X	X
~~SW07~~	S		~~14:55~~	~~0-4.5'~~		X	X	X
~~SW08~~ SW07	S		15:05	0-3'		X	X	X

Work Order Notes

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	5/15/19 0727	03/16/2019 17:00	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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Page 51 of 54

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 617911

www.xenco.com Page 2 of 3

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 N "A" St	Address:	
City, State ZIP:	Midland TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com klambach@ltenv.com

Work Order Comments

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

Project Name:	PLU BS 22 Battery	Turn Around	
Project Number:	012918199	Routine ☐	
P.O. Number:	2RP5182	Rush: 1DAY	
Sampler's Name:	L. Lambach	Due Date: 03/19/19	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.1 3.0	Thermometer ID	NA
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015 EPA)	BTEX (EPA 8021)	Chlorides (EPA 325.0)
SW08	S	03/15/19	15:15	0-3'	1	X	X	X
FS05			16:00	3'	1			
SW09			16:20	0-3'	1			
FS06			16:25	3'	1			
SW01			16:45	0-1'	1			
SW02			16:50	0-1'	1			
SW03			17:00	0-1'	1			
SW04			17:05	0-1'	1			
FS01			17:10	1'	1			

Work Order Notes

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

Sample Comments

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	3/18 0947	03/16/2019 17:00	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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Page 52 of 54

Chain of Custody

Work Order No: 617911

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Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 3 of 3

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com, llaunbard@ltenv.com

Work Order Comments

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

Project Name:	PLU BS 22 Battery	Turn Around	
Project Number:	012918199	Routine	☐
P.O. Number:	2RP-5182	Rush:	1 DAY
Sampler's Name:	L. Launbard	Due Date:	03/19/19

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.1 3.0	Thermometer ID:	9
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH01	S	03/15/2019	16:40	8.5'	X	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	3/18 0987	03/16/2019 17:00	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.001

Page 53 of 54

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/18/2019 09:27:00 AM

Work Order #: 617911

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 *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: 03/18/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 03/18/2019

Kalei Stout

ATTACHMENT 3: SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: PLU BS 22 SS02A		Date: 03/14/2019	
Project Name:		RP Number: 2RP-5182	
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: L. Lambert	Method: hand auger / backhoe
Lat/Long: proximate SS02A	Field Screening: PID chlorides	Hole Diameter: 2.5"	Total Depth: 4'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	1.7	/		0			caliche, tan N odor
					1	1'		
M	<128	0.1	/		2	2'		coarse sand, brown N odor
M	<128	0.3	/		3	3'		fine sand, brown N odor
M	<128	0.4	/	SS02A	4	4'		Like sand, brown, caliche mix N odor
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:	Date:
SS03A	03/14/2019
Project Name:	**RP Number:**
PLU BS 22	2RP5182

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
L. Laumbach	Had Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
Process SS03A	PID chlorides	2.5"	4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	2.5	/		0 1	1'		caliche / sand mix ~50/50 tan brown — No odor
M	<128	0.3	/		2	2'		Sand, brown, flecks of caliche — No odor
M	<128	0.7	/		3	3'		Sand course brown — No odor
M	<128	0.6	/	SS03A	4	4'		Sand, course, brown caliche auger refusal — No odor
					5 6 7 8 9 10 11 12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:	Date:
SS04A	03/14/2019
Project Name:	**RP Number:**
PLU BS 22	2RP 5182

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
L. Laumbach	Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
pravias SS04	PID Chlorides	2.5"	4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	2.3	/		0–1	1'		fine sand brown, moist N-odor
M	<128	1.5	/		2	2'		Lt sand
M	<128	4.0	/		3	3'		Lt sand
M	<128	1.2	/	SS04A	4	4'		Lt Sand
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: PH01	Date: 03/15/2019
Project Name: PLU BS 22	RP Number: 2RP 5182
Logged By: L. Laumbach	Method: ~~hand auger~~ backhoe
Hole Diameter: 1.5'	Total Depth: 8.5'
Field Screening: chloride	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			excavated
					1			
					2			
					3			
					4			
					5			caliche, soft not fully formed, crumbles
D	2.2(hyf4) 1380ppm				6			caliche, soft Nodr, tan
					7			
D	<1 <600ppm	/		PH01	8	8.5'		caliche, tan, flakes visible, →
					9			
					10			
					11			
					12			

Northern view of the release area prior to excavation activities.

Project: 012918199	XTO Energy, Inc. Poker Lake Unit Big Sinks 22 Battery	LTE Advancing Opportunity
December 28, 2018	Photographic Log	

Northern view of the larger excavation in the pasture.

Project: 012918199	XTO Energy, Inc. Poker Lake Unit Big Sinks 22 Battery	LTE Advancing Opportunity
March 15, 2019	Photographic Log	

Southern view of the smaller excavation on the well pad.

Project: 012918199	XTO Energy, Inc. Poker Lake Unit Big Sinks 22 Battery	LTE Advancing Opportunity
March 15, 2019	Photographic Log	