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	NAB1923158858
District RP	2RP-5588
Facility ID	
Application ID	pAB1923158608

Release Notification IRM1M-190802-C-1410

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)* NAB1923158858
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.0953753° Longitude -103.8630293°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 421H Battery	Site Type pipeline near Production Well Facility
Date Release Discovered 7/20/2019	API# *(if applicable)* 30-015-41033

Unit Letter	Section	Township	Range	County
P	27	25S	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) 24.23	Volume Recovered (bbls) 21.60
☒ Produced Water	Volume Released (bbls) 1187.74	Volume Recovered (bbls) 1058.40
	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

Contract company struck an XTO Energy 6" produced water line while attempting to contour an excavation for a new pipeline. Fluids were released from the line to the excavated trench. The line was isolated and vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923158858
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Facility ID	
Application ID	pAB1923158608

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 Amy Ruth to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos, Deborah McKinney, and Yolanda Jimenez (BLM) on 7/20/2019 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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 8/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

OCD Only

Received by: Amalia Bustamante
Date: 8/19/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5588
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-5588
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: __09/26/2019_____

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-5588
Facility ID	
Application ID	

Remediation Plan

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

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

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

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 09/26/2019

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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

September 26, 2019

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

RE: Deferral Request
Poker Lake Unit 421H Battery
Remediation Permit Number 2RP-5588
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing soil sampling and excavation activities at the Poker Lake Unit 421H Battery (Site) in Unit P, Section 27, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil following the release of crude oil and produced water into an open pipeline trench east of the Site lease road. Based on the results of the soil sampling events, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation.

RELEASE BACKGROUND

On July 20, 2019, a six-inch produced water line was struck while attempting to contour an excavation for a new pipeline. Approximately 24.23 barrels (bbls) of crude oil and 1,187.74 bbls of produced water were released from the damaged water line into the open pipeline trench. The damaged line was isolated and vacuum trucks were dispatched to the Site to recover free-standing fluid; approximately 21.60 bbls of crude oil, and 1,058.40 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 2, 2019, and was assigned RP Number 2RP-5588 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 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 New Mexico Office of State Engineers (NM OSE) well C 03782, located approximately 1.66 miles west of the Site. The water well has a depth to groundwater of

approximately 277 feet bgs and a total depth of 805 feet bgs. Ground surface elevation at the water well location is 3,200 feet above mean seal level (AMSL), which is approximately 77 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an NM OSE-identified stream located approximately 2,100 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- TPH: 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On July 22 and August 1, 2019, LTE personnel inspected the Site to evaluate the release extent. Staining was observed in the release area within the open pipeline trench. LTE personnel collected and field screened two preliminary soil samples (SS01 and SS02) within the release extent from a depth of approximately 1 foot bgs to assess for soil impacts. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Based on elevated field screening results, the preliminary soil samples were not submitted to the laboratory for analysis. The release extent and soil sample locations were mapped utilizing a handheld Global Positing System (GPS) unit and are depicted on Figure 2.

Based on visible staining in the release area within the open pipeline trench and field screening results, soil excavation and assessment activities were warranted. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

On August 5, 2019, LTE personnel returned to the Site to oversee excavation of soil as indicated by visual observations and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab®

test strips, respectively. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW12 were collected from the sidewalls of the excavation at depths ranging from the surface to 6 feet bgs. Composite soil samples FS01 through FS12 were collected from the floor of the excavation at depths of 6 feet bgs. The excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Excavation confirmation soil sample locations are presented on Figure 3.

On August 20 through August 26, 2019, LTE personnel returned to the Site to oversee the further excavation of impacted soil in the areas of soil samples FS01, FS11, FS12, SW01 through SW04, SW07, and SW08 collected from the floor and sidewalls of the August 5, 2019, excavation. Confirmation soil samples FS01A, FS11A, FS12A were collected from the floor of the final excavation extent from 10 feet bgs. Confirmation soil samples SW13 through SW22 were collected from the sidewalls of the final excavation extent at depths ranging from the surface to 9 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The locations of final excavation confirmation samples are presented on Figure 4.

The final excavation extent measured approximately 4,320 square feet in area. A total of approximately 1,440 cubic yards of impacted soil were removed from the excavation. The impacted soil will be transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico.

On August 27, 2019, LTE personnel returned to the Site to oversee soil assessment activities to delineate impacted soil as indicated by the laboratory analytical result for excavation soil sample SW17. Boreholes and potholes were advanced via hydro-vacuum and hand auger at eight locations east and south of the release point. Boreholes BH01 through BH03 were advanced to a depth of 9 feet bgs along the southern edge of the open excavation. Pothole PH01 was advanced to a depth of 6 feet bgs, potholes PH02 through PH04 were advanced to a depth of 9 feet bgs, and borehole BH04 was advanced to a depth of 2.5 feet bgs. Soil samples were collected from depths ranging from 1 foot to 9 feet bgs in each borehole and pothole. Four delineation soil samples were collected from boreholes BH01 through BH03, and two delineation soil samples were collected from borehole BH04 and potholes PH01 through PH04.

Soil samples were field screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The potholes were backfilled with the soil removed from the potholes. The potholes and delineation soil sample locations are depicted on Figure 5.

ANALYTICAL RESULTS

Laboratory analytical results indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in excavation soil samples SW05, SW06, SW09 through SW12, and FS02 through FS10. Laboratory analytical results indicated that GRO and DRO, TPH and/or chloride concentrations exceeded the Closure Criteria in excavation soil samples SW01 through SW04, SW07, SW08, FS01, FS11, and FS12.

Additional soil was excavated in the areas of sidewall samples SW01 through SW04, SW07, and SW08 and floor samples FS01, FS11, and FS12. Laboratory analytical results for subsequent sidewall samples SW13 through SW16 and SW18 through SW22 and subsequent floor samples FS01A, FS11A, and FS12A indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was required in these areas. Laboratory analytical results for subsequent sidewall sample SW17 indicated that GRO and DRO and TPH concentrations continued to exceed the Closure Criteria. Further excavation of impacted soil beyond excavation sidewall sample SW17 was limited due to the presence of active pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any active pipelines. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the active pipeline. This policy was enforced where impacted soil was identified within 2 feet of an active pipeline in soil sample SW17.

Delineation boreholes BH01 through BH03 were advanced in the area of sidewall soil sample SW17 as close to the pipeline as possible to assess the extent of impacted soil remaining in place. Laboratory analytical results indicated that GRO and DRO, TPH, and/or chloride concentrations exceeded the Closure Criteria in borehole delineation soil samples BH01/BH01A/BH01B/BH01C collected at depths ranging from 1 foot to 9 feet bgs, BH02C collected at 9 feet bgs, and BH03C collected at 9 feet bgs. Further lateral delineation was completed by advancing borehole BH04 and potholes PH01 through PH03 to the south of boreholes BH01 through BH03. Laboratory analytical results for the delineation soil samples collected from borehole BH04 and potholes PH01 through PH04 indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and the extent of impacted soil was defined. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

DEFERRAL REQUEST

A total of approximately 1,440 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of active pipelines. Impacted soil was excavated to the extent possible, and laboratory analytical results for excavation sidewall sample SW17 collected from the final excavation extent indicated that soil with GRO and DRO and TPH concentrations exceeding the Closure Criteria was left in place within 2 feet of an active pipeline.

The impacted soil remaining in place in this area is delineated vertically and laterally by excavation soil samples SW13, SW18, and FS01A collected from the sidewalls and floor of the final excavation extent, and delineation soil samples PH03/PH03A and PH04/PH04A collected from potholes south of the release extent. Although elevated chloride concentrations are present in the sidewall next to the pipeline as deep as 9 feet bgs, excavation floor samples collected at 10 feet bgs confirm vertical extent. Elevated GRO and DRO and TPH concentrations remain at shallower depths at SW17 and BH01; however, TPH concentrations are delineated at 9 feet bgs by excavation floor samples and boreholes and potholes.

An estimated 230 cubic yards of impacted soil remains in place, assuming a maximum 10-foot depth and lateral delineation soil samples from PH03 and PH04. XTO used an excavator and, ultimately, a hydro-vacuum to remove as much soil as safely possible from the vicinity of the pipeline. The remaining TPH and chloride impact is beneath the pipeline, but delineated. Results of delineation sampling are discrete samples showing remaining impacted soil. Composite sampling completed in the excavation floor and sidewalls indicate the marjoity of the impacts have been addressed. Additional drilling and/or soil removal near the pipeline will compromise safety of personnel and pipeline integrity.

XTO requests to backfill the existing excavation and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. No saturated soil remains in place and mass source removal has occurred. Remaining impact is delineated vertically and laterally. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests deferral of final remediation for RP Number 2RP-5588. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Figure 5	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5588)
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sample Logs
Attachment 4	Laboratory Analytical Reports

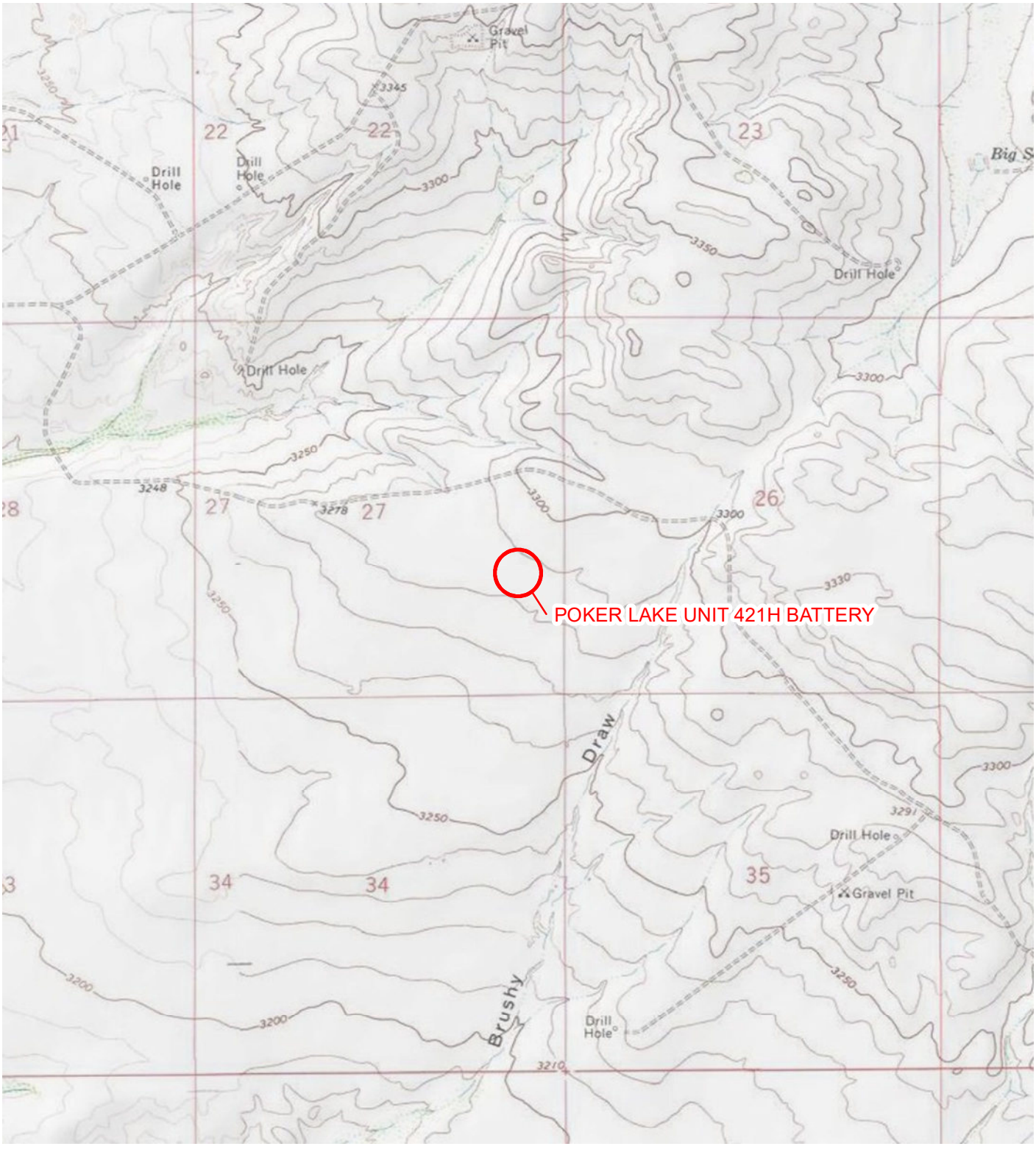

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5588

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 421H BATTERY
UNIT P SEC 27 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919160_PLU 421H BATTERY\012919160_FIG01_SL_2019.mxd

LEGEND

- SOIL SAMPLE
- WATER LINE
- RELEASE EXTENT

IMAGE COURTESY OF ESRI

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 421H BATTERY
UNIT P SEC 27 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: REMEDIATION PERMIT NUMBER 2RP-5588

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LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- WATER LINE
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5588

IMAGE COURTESY OF ESRI

0 60 120
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 421H BATTERY
UNIT P SEC 27 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919160_PLU 421H BATTERY\012919160_FIG03_EXCAVATION_2019.mxd

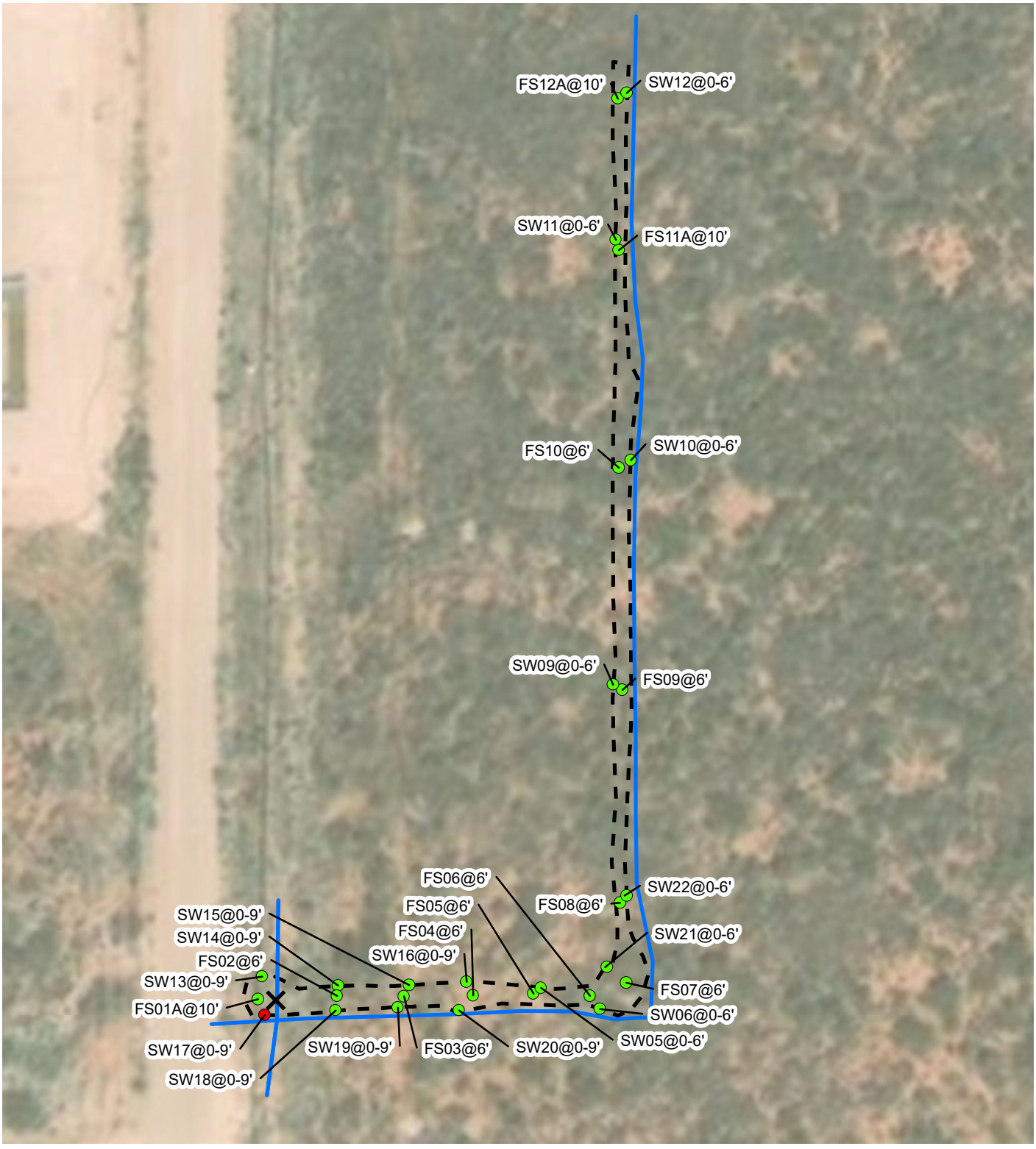

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- WATER LINE
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5588

0 60 120
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 421H BATTERY
UNIT P SEC 27 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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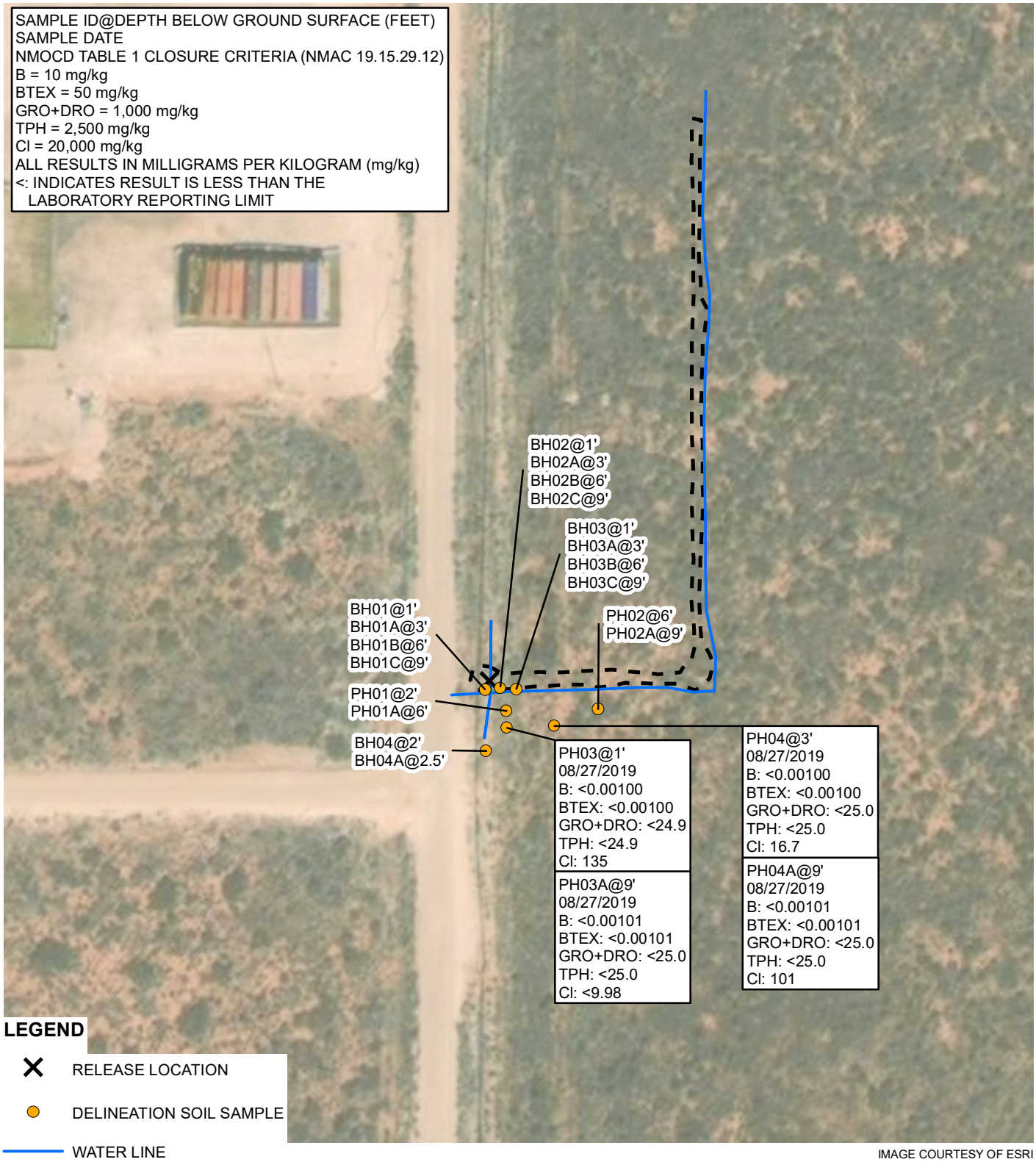

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5588

FIGURE 5
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 421H BATTERY
UNIT P SEC 27 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919160_PLU 421H BATTERY\012919160_FIG05_DELINEATION_5588.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 421H BATTERY
REMEDIATION PERMIT NUMBER 2RP-5588
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS01	6	08/05/2019	<0.00200	0.0229	0.0390	0.156	0.218	52.5	1,810	316	**1,860**	2,180	9,840
FS01A	10	08/20/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	13,300
FS02	6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	103	18.0	103	121	13,000
FS03	6	08/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	134	23.2	134	157	18,200
FS04	6	08/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	47.4	<14.9	47.4	47.4	17,100
FS05	6	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	60.8	<15.0	60.8	60.8	16,800
FS06	6	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	55.0	<15.0	55.0	55.0	15,000
FS07	6	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	175	28.0	175	203	11,100
FS08	6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	109	16.7	109	126	11,000
FS09	6	08/05/2019	<0.00198	<0.00198	<0.00198	0.00752	0.00752	<15.0	81.5	<15.0	81.5	81.5	17,300
FS10	6	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	515	78.8	515	594	9,110
FS11	6	08/05/2019	<0.00199	0.0148	0.112	0.404	0.531	132	1,830	249	**1,960**	2,210	10,400
FS11A	10	08/21/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	3,650
FS12	6	08/05/2019	<0.00199	<0.00199	0.00589	0.0296	0.0355	48.6	1,280	184	**1,330**	1,510	8,400
FS12A	10	08/21/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	4,730
SW01	0 - 6	08/05/2019	0.00200	0.0806	0.0942	0.668	0.845	177	4,030	437	**4,210**	**4,640**	**26,800**
SW02	0 - 6	08/05/2019	<0.00199	0.105	0.109	0.764	0.978	232	4,820	438	**5,050**	**5,490**	13,400
SW03	0 - 6	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	87.0	15.4	87.0	102	**29,200**
SW04	0 - 6	08/05/2019	<0.00198	0.00716	0.0138	0.119	0.140	54.8	1,020	133	**1,070**	1,210	14,200
SW05	0 - 6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	16.1	<15.0	16.1	16.1	7,740
SW06	0 - 6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	198	28.2	198	226	13,700
SW07	0 - 6	08/05/2019	<0.00200	0.0400	0.199	1.60	1.84	556	3,190	248	**3,750**	**3,990**	7,740
SW08	0 - 6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	53.9	<15.0	53.9	53.9	**22,200**
SW09	0 - 6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	10,300
SW10	0 - 6	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	9,780

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 421H BATTERY
REMEDIATION PERMIT NUMBER 2RP-5588
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SW11	0 - 6	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	11,500
SW12	0 - 6	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	4,960
SW13	0 - 9	08/21/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.0	<25.0	<25.0	<25.0	<25.0	187
SW14	0 - 9	08/21/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	43.4
SW15	0 - 9	08/21/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<24.9	<24.9	<24.9	<24.9	<24.9	<10.0
SW16	0 - 9	08/21/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	10.6
SW17	0 - 9	08/22/2019	<0.00100	0.0289	0.0530	0.429	0.511	268	2,310	<24.9	**2,580**	**2,580**	15,800
SW18	0 - 9	08/22/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<24.9	<24.9	<24.9	<24.9	<24.9	11,600
SW19	0 - 9	08/22/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	941
SW20	0 - 9	08/22/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	1,150
SW21	0 - 6	08/26/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.0	<25.0	<25.0	<25.0	<25.0	637
SW22	0 - 6	08/26/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.0	<25.0	<25.0	<25.0	<25.0	825
BH01	1	08/22/2019	<0.500	0.770	1.69	11.5	14.0	446	4,880	<25.0	**5,330**	**5,330**	1,320
BH01A	3	08/22/2019	<0.00100	0.00745	0.0197	0.166	0.193	79.0	1,930	<24.9	**2,010**	2,010	9,640
BH01B	6	08/22/2019	<0.500	1.05	1.73	14.0	16.8	561	5,100	<25.0	**5,660**	**5,660**	**24,200**
BH01C	9	08/22/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	**23,900**
BH02	1	08/22/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.1	<25.1	<25.1	<25.1	<25.1	16.8
BH02A	3	08/22/2019	<0.000990	<0.000990	<0.000990	0.00254	0.00254	<25.1	<25.1	<25.1	<25.1	<25.1	66.8
BH02B	6	08/22/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<25.1	88.4	<25.1	88.4	88.4	5,480
BH02C	9	08/22/2019	<0.00101	0.00133	0.00377	0.0328	0.0379	<24.9	380	<24.9	380	380	**27,400 D**
BH03	1	08/22/2019	<0.00100	<0.00100	<0.00100	0.00596	0.00596	<25.0	<25.0	<25.0	<25.0	<25.0	57.9
BH03A	3	08/22/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	13.0
BH03B	6	08/22/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	3,970
BH03C	9	08/22/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	**23,700**
BH04	2	08/26/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	<24.9	<24.9	<24.9	<24.9	<9.88

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 421H BATTERY
REMEDIATION PERMIT NUMBER 2RP-5588
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BH04A	2.5	08/26/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<24.9	<24.9	<24.9	<24.9	<24.9	17.2
PH01	2	08/26/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	<10.0
PH01A	6	08/26/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	168
PH02	6	08/26/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<25.0	<25.0	<25.0	<25.0	<25.0	16.8
PH02A	9	08/26/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<24.9	<24.9	<24.9	<24.9	<24.9	<9.84
PH03	1	08/27/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<24.9	<24.9	<24.9	<24.9	<24.9	135
PH03A	9	08/27/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	<9.98
PH04	3	08/27/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	16.7
PH04A	9	08/27/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	101
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
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
D - result is from a diluted sample

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5588)

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	NAB1923158858
District RP	2RP-5588
Facility ID	
Application ID	pAB1923158608

Release Notification IRM1M-190802-C-1410

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)* NAB1923158858
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.0953753° Longitude -103.8630293°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 421H Battery	Site Type pipeline near Production Well Facility
Date Release Discovered 7/20/2019	API# *(if applicable)* 30-015-41033

Unit Letter	Section	Township	Range	County
P	27	25S	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) 24.23	Volume Recovered (bbls) 21.60
☒ Produced Water	Volume Released (bbls) 1187.74	Volume Recovered (bbls) 1058.40
	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

Contract company struck an XTO Energy 6" produced water line while attempting to contour an excavation for a new pipeline. Fluids were released from the line to the excavated trench. The line was isolated and vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923158858
District RP	2RP-5588
Facility ID	
Application ID	pAB1923158608

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 Amy Ruth to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos, Deborah McKinney, and Yolanda Jimenez (BLM) on 7/20/2019 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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 8/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

OCD Only

Received by: Amalia Bustamante
Date: 8/19/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5588
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-5588
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: __09/26/2019_____

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-5588
Facility ID	
Application ID	

Remediation Plan

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

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

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

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 09/26/2019

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

ATTACHMENT 2: PHOTOGRAPHIC LOG

Soil surrounding the point of release during site assessment activities.

Project: 012919260	XTO Energy, Inc. Poker Lake Unit 421H Battery	LTE Advancing Opportunity
July 22, 2019	Photographic Log	

Northern view of final excavation extent during confirmation soil sampling activities.

Project: 012919160	XTO Energy, Inc. Poker Lake Unit 421H Battery	LTE Advancing Opportunity
August 27, 2019	Photographic Log	

ATTACHMENT 3: LITHOLOGIC SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH01	08/22/19
Project Name:	**RP Number:**
PLU 421	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith	Method:
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth: 9'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	2284	>15K	N	BH01	0–2		S	SP-SM, reddish brwn, topsoil, low plasticity, poorly graded, very strong odor
Dry	6994	2557	N	BH01A	3–5			GP, caliche, gravel-sand mix, poorly graded, tan very hard, no plasticity slight sweet odor
Dry	27703	>15K	N	BH01B	6–8			same lith as 3', very strong odor
Dry	31298	18.1	N	BH01C	9			same lith as 3', slight odor
					10–12			deepest sample @ 9'

Fatima

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH02	08/22/19
Project Name:	**RP Number:**
PLU 421	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith	Method:
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth: 9'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	3.4	N	BH02	0–1		S	SP-SM, reddish brwn, topsoil, poorly graded, low plasticity, no odor
Dry	<179	2.7	N	BH02A	3			GP, caliche, tan, poorly graded, no plasticity, no odor
Dry	5846	45.8	N	BH02B	6			same Lith as 3', no odor
Dry	24214	6978	N	BH02C	9		↓	same Lith as 3', slight sweet odo
								deepest sample @ 9'

Fatima

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH03	08/22/19
Project Name:	**RP Number:**
PLU 421	
Logged By: Fatima Smith	**Method:**
Lat/Long:	**Field Screening:**
Hole Diameter:	**Total Depth:** 91

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.8	N	BH03	0–1		S	SP-SM, reddish brwn, topsoil, poorly graded, low plasticity, no odor
Dry	<179	2.1	N	BH03A	3			GP, tan, caliche, poorly graded, no plasticity, no odor
Dry	2290	5.4	N	BH03B	6			
Dry	14324	4.0	N	BH03C	9			deepest sample @ 91

Fatima

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
BH04	08/26/19
Project Name:	**RP Number:**
PLU 421	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Fatima Smith / Method:
Lat/Long: / Field Screening:	Hole Diameter: / Total Depth: 2.5'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	35.2	N		0–1		S	SP-SM, reddish brwn, topsoil, poorly graded, low plasticity, no odor
Dry	<179	63.4	N	BH04	1–2		S	
Dry	<179	26.5	N	BH04A	2		S	deepest sample @ 2.5'

0 1 2 3 4 5 6 7 8 9 10 11 12

Fatima

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
PH01	08/26/19
Project Name:	**RP Number:**
PLU 421	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith	Method:
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth: 6'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	24.3	N		0–1		S	SP-SM, reddish brwn, low plasticity, poorly graded, no odor
Dry	<179	24.3	N	PH01	2–3			
Dry	<179	21.6	N		4–5			tan, caliche, poorly graded, no plasticity, no odor
~~Dry~~	~~218~~	~~718~~	N	PH01A	6			deepest sample @ 6'

Fatima

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
PH02	08/26/19
Project Name:	**RP Number:**
PLU 421	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith	Method:
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth: 9'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	20.3	N		0–1		S	SP-SM, poorly graded, reddish brown, low plasticity, no odor
Dry	<179	5.9	N		2			caliche, tan, poorly graded, no odor, no plasticity
~~Dry~~	F.S.				3			
Dry	<179	31.7	N		4			
					5			
Dry	<179	38.2	N	PH02	6			
					7			
Dry	<179	24.4	N		8			
Dry	<179	16.2	N	PH02A	9			deepest sample @ 9'
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
PH03	08/27/19
Project Name:	**RP Number:**
PLU 421	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth: 91

Lat/Long: | Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.6	N	PH03	0–1		S	SP-SM, poorly graded, reddish brwn, low plasticity, no odor
Dry	<179	0.4	N		3			caliche, tan, very hard, poorly graded, no odor, no plasticity
Dry	<179	0.4	N		6			
Dry	<179	0.3	N	PH03A	9			deepest sample @ 91

0 1 2 3 4 5 6 7 8 9 10 11 12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
PH04	08/27/19
Project Name:	**RP Number:**
PLU 421	
Logged By: Fatima Smith	**Method:**
Hole Diameter:	**Total Depth:** 9'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.2	N		0–2		S	SP-SM, poorly graded, reddish brwn, low plasticity, no odor
Dry	<179	0.5	N	PH04	3–4			caliche, tan, very hard, poorly graded, no plasticity, no odor
Dry	<179	0.5	N		6			
Dry	<179	0.3	N	PH04A	9			deepest sample @ 9'

0 1 2 3 4 5 6 7 8 9 10 11 12

Fatima

Analytical Report 633407

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 421

012919160

10-SEP-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
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-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10-SEP-19

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

Reference: XENCO Report No(s): **633407**
PLU 421
Project Address:

Dan Moir:

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) 633407. 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. 633407 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 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	08-05-19 09:12	6 ft	633407-001
FS02	S	08-05-19 09:17	6 ft	633407-002
FS03	S	08-05-19 09:26	6 ft	633407-003
FS04	S	08-05-19 09:29	6 ft	633407-004
FS05	S	08-05-19 09:36	6 ft	633407-005
FS06	S	08-05-19 09:39	6 ft	633407-006
FS07	S	08-05-19 09:47	6 ft	633407-007
FS08	S	08-05-19 12:17	6 ft	633407-008
FS09	S	08-05-19 12:23	6 ft	633407-009
FS10	S	08-05-19 12:29	6 ft	633407-010
FS11	S	08-05-19 12:38	6 ft	633407-011
FS12	S	08-05-19 12:42	6 ft	633407-012
SW01	S	08-05-19 10:04	0 - 6 ft	633407-013
SW02	S	08-05-19 10:11	0 - 6 ft	633407-014
SW03	S	08-05-19 10:21	0 - 6 ft	633407-015
SW04	S	08-05-19 10:29	0 - 6 ft	633407-016
SW05	S	08-05-19 10:59	0 - 6 ft	633407-017
SW06	S	08-05-19 10:57	0 - 6 ft	633407-018
SW07	S	08-05-19 11:01	0 - 6 ft	633407-019
SW08	S	08-05-19 13:09	0 - 6 ft	633407-020
SW09	S	08-05-19 13:16	0 - 6 ft	633407-021
SW10	S	08-05-19 13:22	0 - 6 ft	633407-022
SW11	S	08-05-19 13:27	0 - 6 ft	633407-023
SW12	S	08-05-19 13:32	0 - 6 ft	633407-024

Sample receipt non conformances and comments:

Per clients email, corrected sample names below. NEW VERSION GENERATED JK 09/10/19
FS04 --> FS01
FS05 --> FS02
FS06 --> FS03
FS07 --> FS04
FS08 --> FS05
FS09 --> FS06
FS10 --> FS07
FS11 --> FS08
FS12 --> FS09
FS13 --> FS10
FS14 --> FS11
FS15 --> FS12

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098269 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3098280 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; data confirmed by re-analysis.
Samples affected are: 633407-011,633407-019,633407-014,633407-013.

Lab Sample ID 633407-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 633407-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 633407

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-08-19 11:05 am
Report Date: 10-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	633407-001		633407-002		633407-003		633407-004		633407-005		633407-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	6- ft		6- ft		6- ft		6- ft		6- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-05-19 09:12		Aug-05-19 09:17		Aug-05-19 09:26		Aug-05-19 09:29		Aug-05-19 09:36		Aug-05-19 09:39	
BTEX by EPA 8021B	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-09-19 21:00		Aug-09-19 21:20		Aug-09-19 21:41		Aug-09-19 22:01		Aug-09-19 22:21		Aug-09-19 22:41	
	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	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Toluene		0.0229	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		0.0390	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		0.0766	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00404	0.00404	<0.00396	0.00396	<0.00399	0.00399
o-Xylene		0.0791	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		0.156	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		0.218	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40	
	Analyzed:	Aug-08-19 14:59		Aug-08-19 15:04		Aug-08-19 15:10		Aug-08-19 15:16		Aug-08-19 15:33		Aug-08-19 15:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9840	50.0	13000	99.8	18200	100	17100	100	16800	99.2	15000	99.0
TPH by SW8015 Mod	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-09-19 14:10		Aug-09-19 15:06		Aug-09-19 15:25		Aug-09-19 15:44		Aug-09-19 16:03		Aug-09-19 16:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		52.5	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		1810	15.0	103	15.0	134	15.0	47.4	14.9	60.8	15.0	55.0	15.0
Motor Oil Range Hydrocarbons (MRO)		316	15.0	18.0	15.0	23.2	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		2180	15.0	121	15.0	157	15.0	47.4	14.9	60.8	15.0	55.0	15.0
Total GRO-DRO		1860	15.0	103	15.0	134	15.0	47.4	14.9	60.8	15.0	55.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 633407

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-08-19 11:05 am
Report Date: 10-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	633407-007		633407-008		633407-009		633407-010		633407-011		633407-012	
	Field Id:	FS07		FS08		FS09		FS10		FS11		FS12	
	Depth:	6- ft		6- ft		6- ft		6- ft		6- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-05-19 09:47		Aug-05-19 12:17		Aug-05-19 12:23		Aug-05-19 12:29		Aug-05-19 12:38		Aug-05-19 12:42	
BTEX by EPA 8021B	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-09-19 23:01		Aug-09-19 23:21		Aug-09-19 23:41		Aug-10-19 00:02		Aug-10-19 01:20		Aug-10-19 01:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	0.0148	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	0.112	0.00199	0.00589	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00398	0.00398	0.00502	0.00397	<0.00397	0.00397	0.169	0.00398	0.0138	0.00398
o-Xylene		<0.00198	0.00198	<0.00199	0.00199	0.00250	0.00198	<0.00198	0.00198	0.235	0.00199	0.0158	0.00199
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199	0.00752	0.00198	<0.00198	0.00198	0.404	0.00199	0.0296	0.00199
Total BTEX		<0.00198	0.00198	<0.00199	0.00199	0.00752	0.00198	<0.00198	0.00198	0.531	0.00199	0.0355	0.00199
Chloride by EPA 300	***Extracted:***	Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40	
	Analyzed:	Aug-08-19 15:44		Aug-08-19 15:50		Aug-08-19 15:55		Aug-08-19 16:18		Aug-08-19 16:23		Aug-08-19 16:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		11100	50.5	11000	50.0	17300	99.0	9110	50.2	10400	49.8	8400	50.1
TPH by SW8015 Mod	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-09-19 16:41		Aug-09-19 17:00		Aug-09-19 17:19		Aug-09-19 17:37		Aug-09-19 18:15		Aug-09-19 18:34	
	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	132	15.0	48.6	14.9
Diesel Range Organics (DRO)		175	15.0	109	15.0	81.5	15.0	515	15.0	1830	15.0	1280	14.9
Motor Oil Range Hydrocarbons (MRO)		28.0	15.0	16.7	15.0	<15.0	15.0	78.8	15.0	249	15.0	184	14.9
Total TPH		203	15.0	126	15.0	81.5	15.0	594	15.0	2210	15.0	1510	14.9
Total GRO-DRO		175	15.0	109	15.0	81.5	15.0	515	15.0	1960	15.0	1330	14.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 633407

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-08-19 11:05 am
Report Date: 10-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	633407-013		633407-014		633407-015		633407-016		633407-017		633407-018	
	Field Id:	SW01		SW02		SW03		SW04		SW05		SW06	
	Depth:	0-6 ft		0-6 ft		0-6 ft		0-6 ft		0-6 ft		0-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-05-19 10:04		Aug-05-19 10:11		Aug-05-19 10:21		Aug-05-19 10:29		Aug-05-19 10:59		Aug-05-19 10:57	
BTEX by EPA 8021B	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-10-19 02:00		Aug-10-19 02:20		Aug-10-19 02:41		Aug-10-19 03:01		Aug-10-19 03:21		Aug-10-19 03:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00200	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199
Toluene		0.0806	0.00199	0.105	0.00199	<0.00200	0.00200	0.00716	0.00198	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		0.0942	0.00199	0.109	0.00199	<0.00200	0.00200	0.0138	0.00198	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		0.452	0.00398	0.518	0.00398	<0.00399	0.00399	0.0799	0.00397	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		0.216	0.00199	0.246	0.00199	<0.00200	0.00200	0.0391	0.00198	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		0.668	0.00199	0.764	0.00199	<0.00200	0.00200	0.119	0.00198	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		0.845	0.00199	0.978	0.00199	<0.00200	0.00200	0.140	0.00198	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40		Aug-08-19 13:40	
	Analyzed:	Aug-08-19 16:46		Aug-08-19 16:52		Aug-08-19 16:57		Aug-08-19 17:03		Aug-08-19 17:09		Aug-08-19 17:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26800	248	13400	99.8	29200	253	14200	100	7740	49.8	13700	100
TPH by SW8015 Mod	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 12:00	
	Analyzed:	Aug-09-19 18:53		Aug-09-19 19:12		Aug-09-19 19:31		Aug-09-19 19:49		Aug-09-19 20:08		Aug-09-19 20:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		177	15.0	232	15.0	<15.0	15.0	54.8	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		4030	15.0	4820	15.0	87.0	15.0	1020	15.0	16.1	15.0	198	15.0
Motor Oil Range Hydrocarbons (MRO)		437	15.0	438	15.0	15.4	15.0	133	15.0	<15.0	15.0	28.2	15.0
Total TPH		4640	15.0	5490	15.0	102	15.0	1210	15.0	16.1	15.0	226	15.0
Total GRO-DRO		4210	15.0	5050	15.0	87.0	15.0	1070	15.0	16.1	15.0	198	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 633407

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-08-19 11:05 am
Report Date: 10-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	633407-019		633407-020		633407-021		633407-022		633407-023		633407-024	
	Field Id:	SW07		SW08		SW09		SW10		SW11		SW12	
	Depth:	0-6 ft		0-6 ft		0-6 ft		0-6 ft		0-6 ft		0-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-05-19 11:01		Aug-05-19 13:09		Aug-05-19 13:16		Aug-05-19 13:22		Aug-05-19 13:27		Aug-05-19 13:32	
BTEX by EPA 8021B	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 15:16		Aug-08-19 15:16		Aug-08-19 15:16		Aug-08-19 15:16	
	Analyzed:	Aug-10-19 04:01		Aug-10-19 04:21		Aug-10-19 10:21		Aug-10-19 10:41		Aug-10-19 11:01		Aug-10-19 11:22	
	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	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Toluene		0.0400	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Ethylbenzene		0.199	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		0.990	0.00399	<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397	<0.00397	0.00397	<0.00398	0.00398
o-Xylene		0.610	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total Xylenes		1.60	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total BTEX		1.84	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30	
	Analyzed:	Aug-08-19 14:28		Aug-08-19 14:34		Aug-08-19 14:41		Aug-08-19 14:47		Aug-08-19 15:06		Aug-08-19 15:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7740	49.7	22200	248	10300	100	9780	100	11500	101	4960	49.9
TPH by SW8015 Mod	***Extracted:***	Aug-08-19 12:00		Aug-08-19 12:00		Aug-08-19 13:00		Aug-08-19 13:00		Aug-08-19 13:00		Aug-08-19 13:00	
	Analyzed:	Aug-09-19 20:46		Aug-09-19 21:04		Aug-09-19 22:38		Aug-09-19 23:34		Aug-09-19 23:53		Aug-10-19 00:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		556	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)		3190	15.0	53.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		248	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		3990	15.0	53.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		3750	15.0	53.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-001	Date Collected:	08.05.19 09.12	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9840**	50.0	mg/kg	08.08.19 14.59		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**52.5**	15.0	mg/kg	08.09.19 14.10		1
Diesel Range Organics (DRO)	C10C28DRO	**1810**	15.0	mg/kg	08.09.19 14.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**316**	15.0	mg/kg	08.09.19 14.10		1
Total TPH	PHC635	**2180**	15.0	mg/kg	08.09.19 14.10		1
Total GRO-DRO	PHC628	**1860**	15.0	mg/kg	08.09.19 14.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.09.19 14.10	
o-Terphenyl	84-15-1	124	%	70-135	08.09.19 14.10	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-001	Date Collected:	08.05.19 09.12	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.09.19 21.00	U	1
Toluene	108-88-3	**0.0229**	0.00200	mg/kg	08.09.19 21.00		1
Ethylbenzene	100-41-4	**0.0390**	0.00200	mg/kg	08.09.19 21.00		1
m,p-Xylenes	179601-23-1	**0.0766**	0.00399	mg/kg	08.09.19 21.00		1
o-Xylene	95-47-6	**0.0791**	0.00200	mg/kg	08.09.19 21.00		1
Total Xylenes	1330-20-7	**0.156**	0.00200	mg/kg	08.09.19 21.00		1
Total BTEX		**0.218**	0.00200	mg/kg	08.09.19 21.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	08.09.19 21.00	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.09.19 21.00	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-002	Date Collected:	08.05.19 09.17	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13000**	99.8	mg/kg	08.08.19 15.04		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 15.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**103**	15.0	mg/kg	08.09.19 15.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.0**	15.0	mg/kg	08.09.19 15.06		1
Total TPH	PHC635	**121**	15.0	mg/kg	08.09.19 15.06		1
Total GRO-DRO	PHC628	**103**	15.0	mg/kg	08.09.19 15.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.09.19 15.06	
o-Terphenyl	84-15-1	92	%	70-135	08.09.19 15.06	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-002	Date Collected:	08.05.19 09.17	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.09.19 21.20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.09.19 21.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.09.19 21.20	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.09.19 21.20	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-003	Date Collected:	08.05.19 09.26	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18200**	100	mg/kg	08.08.19 15.10		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 15.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**134**	15.0	mg/kg	08.09.19 15.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**23.2**	15.0	mg/kg	08.09.19 15.25		1
Total TPH	PHC635	**157**	15.0	mg/kg	08.09.19 15.25		1
Total GRO-DRO	PHC628	**134**	15.0	mg/kg	08.09.19 15.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.09.19 15.25	
o-Terphenyl	84-15-1	94	%	70-135	08.09.19 15.25	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-003	Date Collected:	08.05.19 09.26	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.09.19 21.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.09.19 21.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.09.19 21.41	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.09.19 21.41	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-004	Date Collected:	08.05.19 09.29	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17100**	100	mg/kg	08.08.19 15.16		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.09.19 15.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	**47.4**	14.9	mg/kg	08.09.19 15.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.09.19 15.44	U	1
Total TPH	PHC635	**47.4**	14.9	mg/kg	08.09.19 15.44		1
Total GRO-DRO	PHC628	**47.4**	14.9	mg/kg	08.09.19 15.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.09.19 15.44	
o-Terphenyl	84-15-1	91	%	70-135	08.09.19 15.44	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-004	Date Collected:	08.05.19 09.29	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.09.19 22.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.09.19 22.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.09.19 22.01	
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.09.19 22.01	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-005	Date Collected:	08.05.19 09.36	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16800**	99.2	mg/kg	08.08.19 15.33		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 16.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**60.8**	15.0	mg/kg	08.09.19 16.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 16.03	U	1
Total TPH	PHC635	**60.8**	15.0	mg/kg	08.09.19 16.03		1
Total GRO-DRO	PHC628	**60.8**	15.0	mg/kg	08.09.19 16.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.09.19 16.03	
o-Terphenyl	84-15-1	92	%	70-135	08.09.19 16.03	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-005	Date Collected:	08.05.19 09.36	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.09.19 22.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.09.19 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.09.19 22.21	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.09.19 22.21	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-006	Date Collected:	08.05.19 09.39	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15000**	99.0	mg/kg	08.08.19 15.38		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 16.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**55.0**	15.0	mg/kg	08.09.19 16.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 16.22	U	1
Total TPH	PHC635	**55.0**	15.0	mg/kg	08.09.19 16.22		1
Total GRO-DRO	PHC628	**55.0**	15.0	mg/kg	08.09.19 16.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.09.19 16.22	
o-Terphenyl	84-15-1	94	%	70-135	08.09.19 16.22	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-006	Date Collected:	08.05.19 09.39	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.09.19 22.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.09.19 22.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.09.19 22.41	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.09.19 22.41	

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PLU 421

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-007	Date Collected:	08.05.19 09.47	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11100**	50.5	mg/kg	08.08.19 15.44		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**175**	15.0	mg/kg	08.09.19 16.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**28.0**	15.0	mg/kg	08.09.19 16.41		1
Total TPH	PHC635	**203**	15.0	mg/kg	08.09.19 16.41		1
Total GRO-DRO	PHC628	**175**	15.0	mg/kg	08.09.19 16.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.09.19 16.41	
o-Terphenyl	84-15-1	93	%	70-135	08.09.19 16.41	

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PLU 421

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-007	Date Collected:	08.05.19 09.47	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.09.19 23.01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.09.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.09.19 23.01	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.09.19 23.01	

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PLU 421

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-008	Date Collected:	08.05.19 12.17	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11000**	50.0	mg/kg	08.08.19 15.50		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 17.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**109**	15.0	mg/kg	08.09.19 17.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.7**	15.0	mg/kg	08.09.19 17.00		1
Total TPH	PHC635	**126**	15.0	mg/kg	08.09.19 17.00		1
Total GRO-DRO	PHC628	**109**	15.0	mg/kg	08.09.19 17.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.09.19 17.00	
o-Terphenyl	84-15-1	88	%	70-135	08.09.19 17.00	

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PLU 421

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-008	Date Collected:	08.05.19 12.17	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.09.19 23.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.09.19 23.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.09.19 23.21	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.09.19 23.21	

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Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-009	Date Collected:	08.05.19 12.23	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17300**	99.0	mg/kg	08.08.19 15.55		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	**81.5**	15.0	mg/kg	08.09.19 17.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 17.19	U	1
Total TPH	PHC635	**81.5**	15.0	mg/kg	08.09.19 17.19		1
Total GRO-DRO	PHC628	**81.5**	15.0	mg/kg	08.09.19 17.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.09.19 17.19	
o-Terphenyl	84-15-1	91	%	70-135	08.09.19 17.19	

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Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-009	Date Collected:	08.05.19 12.23	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.09.19 23.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.09.19 23.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.09.19 23.41	U	1
m,p-Xylenes	179601-23-1	**0.00502**	0.00397	mg/kg	08.09.19 23.41		1
o-Xylene	95-47-6	**0.00250**	0.00198	mg/kg	08.09.19 23.41		1
Total Xylenes	1330-20-7	**0.00752**	0.00198	mg/kg	08.09.19 23.41		1
Total BTEX		**0.00752**	0.00198	mg/kg	08.09.19 23.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.09.19 23.41	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.09.19 23.41	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-010	Date Collected:	08.05.19 12.29	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9110**	50.2	mg/kg	08.08.19 16.18		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 17.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**515**	15.0	mg/kg	08.09.19 17.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**78.8**	15.0	mg/kg	08.09.19 17.37		1
Total TPH	PHC635	**594**	15.0	mg/kg	08.09.19 17.37		1
Total GRO-DRO	PHC628	**515**	15.0	mg/kg	08.09.19 17.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.09.19 17.37	
o-Terphenyl	84-15-1	107	%	70-135	08.09.19 17.37	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-010	Date Collected:	08.05.19 12.29	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.10.19 00.02	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.10.19 00.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	08.10.19 00.02	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.10.19 00.02	

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PLU 421

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-011	Date Collected:	08.05.19 12.38	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10400**	49.8	mg/kg	08.08.19 16.23		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**132**	15.0	mg/kg	08.09.19 18.15		1
Diesel Range Organics (DRO)	C10C28DRO	**1830**	15.0	mg/kg	08.09.19 18.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**249**	15.0	mg/kg	08.09.19 18.15		1
Total TPH	PHC635	**2210**	15.0	mg/kg	08.09.19 18.15		1
Total GRO-DRO	PHC628	**1960**	15.0	mg/kg	08.09.19 18.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.09.19 18.15	
o-Terphenyl	84-15-1	129	%	70-135	08.09.19 18.15	

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PLU 421

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-011	Date Collected:	08.05.19 12.38	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 01.20	U	1
Toluene	108-88-3	**0.0148**	0.00199	mg/kg	08.10.19 01.20		1
Ethylbenzene	100-41-4	**0.112**	0.00199	mg/kg	08.10.19 01.20		1
m,p-Xylenes	179601-23-1	**0.169**	0.00398	mg/kg	08.10.19 01.20		1
o-Xylene	95-47-6	**0.235**	0.00199	mg/kg	08.10.19 01.20		1
Total Xylenes	1330-20-7	**0.404**	0.00199	mg/kg	08.10.19 01.20		1
Total BTEX		**0.531**	0.00199	mg/kg	08.10.19 01.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.10.19 01.20	
4-Bromofluorobenzene	460-00-4	190	%	70-130	08.10.19 01.20	**

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PLU 421

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-012	Date Collected:	08.05.19 12.42	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8400**	50.1	mg/kg	08.08.19 16.40		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**48.6**	14.9	mg/kg	08.09.19 18.34		1
Diesel Range Organics (DRO)	C10C28DRO	**1280**	14.9	mg/kg	08.09.19 18.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**184**	14.9	mg/kg	08.09.19 18.34		1
Total TPH	PHC635	**1510**	14.9	mg/kg	08.09.19 18.34		1
Total GRO-DRO	PHC628	**1330**	14.9	mg/kg	08.09.19 18.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.09.19 18.34	
o-Terphenyl	84-15-1	115	%	70-135	08.09.19 18.34	

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PLU 421

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-012	Date Collected:	08.05.19 12.42	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 01.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 01.40	U	1
Ethylbenzene	100-41-4	**0.00589**	0.00199	mg/kg	08.10.19 01.40		1
m,p-Xylenes	179601-23-1	**0.0138**	0.00398	mg/kg	08.10.19 01.40		1
o-Xylene	95-47-6	**0.0158**	0.00199	mg/kg	08.10.19 01.40		1
Total Xylenes	1330-20-7	**0.0296**	0.00199	mg/kg	08.10.19 01.40		1
Total BTEX		**0.0355**	0.00199	mg/kg	08.10.19 01.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	08.10.19 01.40	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.10.19 01.40	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-013	Date Collected:	08.05.19 10.04	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26800**	248	mg/kg	08.08.19 16.46		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**177**	15.0	mg/kg	08.09.19 18.53		1
Diesel Range Organics (DRO)	C10C28DRO	**4030**	15.0	mg/kg	08.09.19 18.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**437**	15.0	mg/kg	08.09.19 18.53		1
Total TPH	PHC635	**4640**	15.0	mg/kg	08.09.19 18.53		1
Total GRO-DRO	PHC628	**4210**	15.0	mg/kg	08.09.19 18.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	08.09.19 18.53	
o-Terphenyl	84-15-1	128	%	70-135	08.09.19 18.53	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-013	Date Collected:	08.05.19 10.04	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00200**	0.00199	mg/kg	08.10.19 02.00		1
Toluene	108-88-3	**0.0806**	0.00199	mg/kg	08.10.19 02.00		1
Ethylbenzene	100-41-4	**0.0942**	0.00199	mg/kg	08.10.19 02.00		1
m,p-Xylenes	179601-23-1	**0.452**	0.00398	mg/kg	08.10.19 02.00		1
o-Xylene	95-47-6	**0.216**	0.00199	mg/kg	08.10.19 02.00		1
Total Xylenes	1330-20-7	**0.668**	0.00199	mg/kg	08.10.19 02.00		1
Total BTEX		**0.845**	0.00199	mg/kg	08.10.19 02.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	166	%	70-130	08.10.19 02.00	**
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.10.19 02.00	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-014	Date Collected:	08.05.19 10.11	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13400**	99.8	mg/kg	08.08.19 16.52		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**232**	15.0	mg/kg	08.09.19 19.12		1
Diesel Range Organics (DRO)	C10C28DRO	**4820**	15.0	mg/kg	08.09.19 19.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**438**	15.0	mg/kg	08.09.19 19.12		1
Total TPH	PHC635	**5490**	15.0	mg/kg	08.09.19 19.12		1
Total GRO-DRO	PHC628	**5050**	15.0	mg/kg	08.09.19 19.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	08.09.19 19.12	
o-Terphenyl	84-15-1	76	%	70-135	08.09.19 19.12	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-014	Date Collected:	08.05.19 10.11	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 02.20	U	1
Toluene	108-88-3	**0.105**	0.00199	mg/kg	08.10.19 02.20		1
Ethylbenzene	100-41-4	**0.109**	0.00199	mg/kg	08.10.19 02.20		1
m,p-Xylenes	179601-23-1	**0.518**	0.00398	mg/kg	08.10.19 02.20		1
o-Xylene	95-47-6	**0.246**	0.00199	mg/kg	08.10.19 02.20		1
Total Xylenes	1330-20-7	**0.764**	0.00199	mg/kg	08.10.19 02.20		1
Total BTEX		**0.978**	0.00199	mg/kg	08.10.19 02.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.10.19 02.20	
4-Bromofluorobenzene	460-00-4	281	%	70-130	08.10.19 02.20	**

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-015	Date Collected:	08.05.19 10.21	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29200**	253	mg/kg	08.08.19 16.57		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 19.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**87.0**	15.0	mg/kg	08.09.19 19.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**15.4**	15.0	mg/kg	08.09.19 19.31		1
Total TPH	PHC635	**102**	15.0	mg/kg	08.09.19 19.31		1
Total GRO-DRO	PHC628	**87.0**	15.0	mg/kg	08.09.19 19.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.09.19 19.31	
o-Terphenyl	84-15-1	90	%	70-135	08.09.19 19.31	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-015	Date Collected:	08.05.19 10.21	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.10.19 02.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.10.19 02.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.10.19 02.41	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.10.19 02.41	

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PLU 421

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-016	Date Collected:	08.05.19 10.29	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14200**	100	mg/kg	08.08.19 17.03		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**54.8**	15.0	mg/kg	08.09.19 19.49		1
Diesel Range Organics (DRO)	C10C28DRO	**1020**	15.0	mg/kg	08.09.19 19.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**133**	15.0	mg/kg	08.09.19 19.49		1
Total TPH	PHC635	**1210**	15.0	mg/kg	08.09.19 19.49		1
Total GRO-DRO	PHC628	**1070**	15.0	mg/kg	08.09.19 19.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.09.19 19.49	
o-Terphenyl	84-15-1	114	%	70-135	08.09.19 19.49	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-016	Date Collected:	08.05.19 10.29	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 03.01	U	1
Toluene	108-88-3	**0.00716**	0.00198	mg/kg	08.10.19 03.01		1
Ethylbenzene	100-41-4	**0.0138**	0.00198	mg/kg	08.10.19 03.01		1
m,p-Xylenes	179601-23-1	**0.0799**	0.00397	mg/kg	08.10.19 03.01		1
o-Xylene	95-47-6	**0.0391**	0.00198	mg/kg	08.10.19 03.01		1
Total Xylenes	1330-20-7	**0.119**	0.00198	mg/kg	08.10.19 03.01		1
Total BTEX		**0.140**	0.00198	mg/kg	08.10.19 03.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.10.19 03.01	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.10.19 03.01	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-017	Date Collected:	08.05.19 10.59	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7740**	49.8	mg/kg	08.08.19 17.09		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 20.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.1**	15.0	mg/kg	08.09.19 20.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 20.08	U	1
Total TPH	PHC635	**16.1**	15.0	mg/kg	08.09.19 20.08		1
Total GRO-DRO	PHC628	**16.1**	15.0	mg/kg	08.09.19 20.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.09.19 20.08	
o-Terphenyl	84-15-1	90	%	70-135	08.09.19 20.08	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-017	Date Collected:	08.05.19 10.59	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 03.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 03.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.10.19 03.21	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.10.19 03.21	

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PLU 421

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-018	Date Collected:	08.05.19 10.57	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.40	Basis:	Wet Weight
Seq Number:	3097986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13700**	100	mg/kg	08.08.19 17.14		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 20.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	**198**	15.0	mg/kg	08.09.19 20.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**28.2**	15.0	mg/kg	08.09.19 20.27		1
Total TPH	PHC635	**226**	15.0	mg/kg	08.09.19 20.27		1
Total GRO-DRO	PHC628	**198**	15.0	mg/kg	08.09.19 20.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.09.19 20.27	
o-Terphenyl	84-15-1	99	%	70-135	08.09.19 20.27	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-018	Date Collected:	08.05.19 10.57	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 03.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 03.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	08.10.19 03.41	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.10.19 03.41	

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PLU 421

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-019	Date Collected:	08.05.19 11.01	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7740**	49.7	mg/kg	08.08.19 14.28		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**556**	15.0	mg/kg	08.09.19 20.46		1
Diesel Range Organics (DRO)	C10C28DRO	**3190**	15.0	mg/kg	08.09.19 20.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**248**	15.0	mg/kg	08.09.19 20.46		1
Total TPH	PHC635	**3990**	15.0	mg/kg	08.09.19 20.46		1
Total GRO-DRO	PHC628	**3750**	15.0	mg/kg	08.09.19 20.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	08.09.19 20.46	
o-Terphenyl	84-15-1	129	%	70-135	08.09.19 20.46	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-019	Date Collected:	08.05.19 11.01	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.10.19 04.01	U	1
Toluene	108-88-3	**0.0400**	0.00200	mg/kg	08.10.19 04.01		1
Ethylbenzene	100-41-4	**0.199**	0.00200	mg/kg	08.10.19 04.01		1
m,p-Xylenes	179601-23-1	**0.990**	0.00399	mg/kg	08.10.19 04.01		1
o-Xylene	95-47-6	**0.610**	0.00200	mg/kg	08.10.19 04.01		1
Total Xylenes	1330-20-7	**1.60**	0.00200	mg/kg	08.10.19 04.01		1
Total BTEX		**1.84**	0.00200	mg/kg	08.10.19 04.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.10.19 04.01	
4-Bromofluorobenzene	460-00-4	294	%	70-130	08.10.19 04.01	**

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-020	Date Collected:	08.05.19 13.09	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22200**	248	mg/kg	08.08.19 14.34		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098118				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**53.9**	15.0	mg/kg	08.09.19 21.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 21.04	U	1
Total TPH	PHC635	**53.9**	15.0	mg/kg	08.09.19 21.04		1
Total GRO-DRO	PHC628	**53.9**	15.0	mg/kg	08.09.19 21.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.09.19 21.04	
o-Terphenyl	84-15-1	96	%	70-135	08.09.19 21.04	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-020	Date Collected:	08.05.19 13.09	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 12.00	Basis:	Wet Weight
Seq Number:	3098280				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 04.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 04.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	08.10.19 04.21	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.10.19 04.21	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-021	Date Collected:	08.05.19 13.16	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10300**	100	mg/kg	08.08.19 14.41		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 13.00	Basis:	Wet Weight
Seq Number:	3098119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.09.19 22.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 22.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.09.19 22.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.09.19 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.09.19 22.38	
o-Terphenyl	84-15-1	94	%	70-135	08.09.19 22.38	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-021	Date Collected:	08.05.19 13.16	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 15.16	Basis:	Wet Weight
Seq Number:	3098269				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 10.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 10.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	08.10.19 10.21	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.10.19 10.21	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-022	Date Collected:	08.05.19 13.22	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9780**	100	mg/kg	08.08.19 14.47		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 13.00	Basis:	Wet Weight
Seq Number:	3098119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.09.19 23.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 23.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.09.19 23.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.09.19 23.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.09.19 23.34	
o-Terphenyl	84-15-1	97	%	70-135	08.09.19 23.34	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-022	Date Collected:	08.05.19 13.22	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 15.16	Basis:	Wet Weight
Seq Number:	3098269				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.10.19 10.41	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.10.19 10.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.10.19 10.41	
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.10.19 10.41	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-023	Date Collected:	08.05.19 13.27	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11500**	101	mg/kg	08.08.19 15.06		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 13.00	Basis:	Wet Weight
Seq Number:	3098119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.09.19 23.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.09.19 23.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.09.19 23.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.09.19 23.53	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.09.19 23.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.09.19 23.53	
o-Terphenyl	84-15-1	91	%	70-135	08.09.19 23.53	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-023	Date Collected:	08.05.19 13.27	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 15.16	Basis:	Wet Weight
Seq Number:	3098269				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.10.19 11.01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.10.19 11.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.10.19 11.01	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.10.19 11.01	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-024	Date Collected:	08.05.19 13.32	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4960**	49.9	mg/kg	08.08.19 15.12		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 13.00	Basis:	Wet Weight
Seq Number:	3098119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.10.19 00.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.10.19 00.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.10.19 00.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.10.19 00.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.10.19 00.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.10.19 00.12	
o-Terphenyl	84-15-1	91	%	70-135	08.10.19 00.12	

Certificate of Analytical Results 633407

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633407-024	Date Collected:	08.05.19 13.32	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.08.19 15.16	Basis:	Wet Weight
Seq Number:	3098269				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 11.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 11.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.10.19 11.22	
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.10.19 11.22	

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 633407

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683800-1-BLK LCS Sample Id: 7683800-1-BKS LCSD Sample Id: 7683800-1-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	251	100	249	100	90-110	1	20	mg/kg	08.08.19 13:56	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097986 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683801-1-BLK LCS Sample Id: 7683801-1-BKS LCSD Sample Id: 7683801-1-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	246	98	255	102	90-110	4	20	mg/kg	08.08.19 14:31	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633408-001 MS Sample Id: 633408-001 S MSD Sample Id: 633408-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.4	250	266	100	266	100	90-110	0	20	mg/kg	08.08.19 14:15	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633409-003 MS Sample Id: 633409-003 S MSD Sample Id: 633409-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.3	248	258	98	258	98	90-110	0	20	mg/kg	08.08.19 15:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097986 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633244-001 MS Sample Id: 633244-001 S MSD Sample Id: 633244-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	249	100	235	95	90-110	6	20	mg/kg	08.08.19 16:06	

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

QC Summary 633407

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097986 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633261-003 MS Sample Id: 633261-003 S MSD Sample Id: 633261-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	127	252	381	101	388	104	90-110	2	20	mg/kg	08.08.19 14:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098118 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683825-1-BLK LCS Sample Id: 7683825-1-BKS LCSD Sample Id: 7683825-1-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	1050	105	1050	105	70-135	0	20	mg/kg	08.09.19 13:32	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1030	103	70-135	3	20	mg/kg	08.09.19 13:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		117		118		70-135	%	08.09.19 13:32
o-Terphenyl	89		97		97		70-135	%	08.09.19 13:32

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098119 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683829-1-BLK LCS Sample Id: 7683829-1-BKS LCSD Sample Id: 7683829-1-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	1140	114	1130	113	70-135	1	20	mg/kg	08.09.19 22:01	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1010	101	70-135	2	20	mg/kg	08.09.19 22:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		117		115		70-135	%	08.09.19 22:01
o-Terphenyl	92		100		97		70-135	%	08.09.19 22:01

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098118 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-001 MS Sample Id: 633407-001 S MSD Sample Id: 633407-001 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)	52.5	997	1100	105	1100	105	70-135	0	20	mg/kg	08.09.19 14:29	
Diesel Range Organics (DRO)	1810	997	2720	91	2720	91	70-135	0	20	mg/kg	08.09.19 14:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		120		70-135	%	08.09.19 14:29
o-Terphenyl	129		130		70-135	%	08.09.19 14:29

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 633407

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098119 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-021 MS Sample Id: 633407-021 S MSD Sample Id: 633407-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1170	117	1170	117	70-135	0	20	mg/kg	08.09.19 22:57	
Diesel Range Organics (DRO)	<8.10	997	1060	106	1080	108	70-135	2	20	mg/kg	08.09.19 22:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		115		70-135	%	08.09.19 22:57
o-Terphenyl	101		103		70-135	%	08.09.19 22:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098280 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683809-1-BLK LCS Sample Id: 7683809-1-BKS LCSD Sample Id: 7683809-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0867	87	0.0810	81	70-130	7	35	mg/kg	08.09.19 19:01	
Toluene	<0.000456	0.100	0.0779	78	0.0747	75	70-130	4	35	mg/kg	08.09.19 19:01	
Ethylbenzene	<0.00200	0.100	0.0773	77	0.0749	75	70-130	3	35	mg/kg	08.09.19 19:01	
m,p-Xylenes	<0.00101	0.200	0.152	76	0.149	75	70-130	2	35	mg/kg	08.09.19 19:01	
o-Xylene	<0.000344	0.100	0.0784	78	0.0775	78	70-130	1	35	mg/kg	08.09.19 19:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		102		70-130	%	08.09.19 19:01
4-Bromofluorobenzene	107		100		107		70-130	%	08.09.19 19:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683824-1-BLK LCS Sample Id: 7683824-1-BKS LCSD Sample Id: 7683824-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0789	79	0.0848	85	70-130	7	35	mg/kg	08.10.19 08:19	
Toluene	<0.00200	0.100	0.0776	78	0.0810	81	70-130	4	35	mg/kg	08.10.19 08:19	
Ethylbenzene	<0.00200	0.100	0.0876	88	0.0911	91	70-130	4	35	mg/kg	08.10.19 08:19	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.183	92	70-130	4	35	mg/kg	08.10.19 08:19	
o-Xylene	<0.00200	0.100	0.0859	86	0.0891	89	70-130	4	35	mg/kg	08.10.19 08:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		102		70-130	%	08.10.19 08:19
4-Bromofluorobenzene	103		113		121		70-130	%	08.10.19 08:19

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 633407

LT Environmental, Inc.

PLU 421

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-021 MS Sample Id: 633407-021 S MSD Sample Id: 633407-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0923	93	0.0917	92	70-130	1	35	mg/kg	08.10.19 09:00	
Toluene	<0.00198	0.0992	0.0861	87	0.0866	87	70-130	1	35	mg/kg	08.10.19 09:00	
Ethylbenzene	<0.00198	0.0992	0.0951	96	0.0932	93	70-130	2	35	mg/kg	08.10.19 09:00	
m,p-Xylenes	<0.00397	0.198	0.193	97	0.188	94	70-130	3	35	mg/kg	08.10.19 09:00	
o-Xylene	<0.00198	0.0992	0.0970	98	0.0931	93	70-130	4	35	mg/kg	08.10.19 09:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	08.10.19 09:00
4-Bromofluorobenzene	127		119		70-130	%	08.10.19 09:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098280 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-001 MS Sample Id: 633407-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00128	0.100	0.0845	83	70-130	mg/kg	08.09.19 19:41	
Toluene	0.0229	0.100	0.0933	70	70-130	mg/kg	08.09.19 19:41	
Ethylbenzene	0.0390	0.100	0.104	65	70-130	mg/kg	08.09.19 19:41	X
m,p-Xylenes	0.0766	0.201	0.210	66	70-130	mg/kg	08.09.19 19:41	X
o-Xylene	0.0791	0.100	0.150	71	70-130	mg/kg	08.09.19 19:41	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		70-130	%	08.09.19 19:41
4-Bromofluorobenzene	129		70-130	%	08.09.19 19:41

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

Chain of Custody

Work Order No: 633407

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 3

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:		fsmith@ltenv.com, dmoir@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 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	[illegible]	Rush: 24 hr	
Sampler's Name:	Fatima Smith	Due Date: 8/9/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.7 / 0.5	Thermometer ID	[illegible]
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
~~FS04~~ FS01	S	08/05/19	0912	6'	1	X	X	X	
~~FS05~~ FS02			0917						
~~FS06~~ FS03			0926						
~~FS07~~ FS04			0929						
~~FS08~~ FS05			0936						
~~FS09~~ FS06			0939						
~~FS10~~ FS07			0947						
~~FS11~~ FS08			1217						
~~FS12~~ FS09			1223						
~~FS13~~ FS10	↓	↓	1229	↓	↓	↓	↓	↓	

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	[signature]	Anna Byers	8/6/19 1600	2 Anna Byers	[signature]	8/6/19 16:24
3	[signature]	FedEx	8/7/19 14:00	4		8/8/19 1105
5				6		

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	Fatima Smith	Rush: 24 hr	
Sampler's Name:	Fatima Smith	Due Date: 8/9/19	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID		
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 (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
~~FS14~~ ~~FS11~~	S	08/05/19	1238	6'	1	X	X	X
~~FS15~~ ~~FS12~~			1242	6'				
SW01			1004	0'-6'				
SW02			1011					
SW03			1021					
SW04			1029					
SW05			1052					
SW06			1057					
SW07			1101					
SW08			1309					

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Fatima Smith	Anna Boyer	8/16/19 @ 1600	2 Anna Boyer		8/16/19 16:24
3	Fed Ex	8/7/19 1400	4		8/8/19 405
5			6		

Revised Date 051418 Rev. 2018.1

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) www.xenco.com

Work Order No: _____

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	**Turn Around**	
Project Number:	012919160	Routine ☐	
P.O. Number:		Rush: 24 hr	
Sampler's Name:	Fatima Smith	Due Date: 8/9/19	

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):		Thermometer ID		
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 (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW09	S	08/05/19	1316	0'-6'	1	X	X	X
SW10			1322	0'-6'		X	X	X
SW11			1327	0'-6'		X	X	X
SW12			1332	0'-6'		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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Anna Byers	8/6/19 0800	2 Anna Byers		8/6/19 1620
3		Fed Ex	8/7/19 1400	4		8/9/19 1105
5				6		

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/08/2019 11:05:00 AM

Work Order #: 633407

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)?	.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 08/08/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/09/2019

Jessica Kramer

Analytical Report 634914

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 421

012919160

11-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
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-Tampa: Florida (E87429), North Carolina (483)

11-SEP-19

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

Reference: XENCO Report No(s): **634914**
PLU 421
Project Address:

Dan Moir:

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) 634914. 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. 634914 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 634914

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01A	S	08-20-19 10:25	10 ft	634914-001
FS11A	S	08-21-19 12:10	10 ft	634914-002
FS12A	S	08-21-19 12:16	10 ft	634914-003
SW13	S	08-21-19 15:06	0 - 9 ft	634914-004
SW14	S	08-21-19 15:18	0 - 9 ft	634914-005
SW15	S	08-21-19 15:26	0 - 9 ft	634914-006
SW16	S	08-21-19 15:41	0 - 9 ft	634914-007
SW17	S	08-22-19 11:30	0 - 9 ft	634914-008
SW18	S	08-22-19 11:35	0 - 9 ft	634914-009
SW19	S	08-22-19 11:49	0 - 9 ft	634914-010
SW20	S	08-22-19 11:51	0 - 9 ft	634914-011
BH01	S	08-22-19 09:38	1 ft	634914-012
BH01A	S	08-22-19 09:43	3 ft	634914-013
BH01B	S	08-22-19 09:58	6 ft	634914-014
BH01C	S	08-22-19 10:01	9 ft	634914-015
BH02	S	08-22-19 10:17	1 ft	634914-016
BH02A	S	08-22-19 10:18	3 ft	634914-017
BH02B	S	08-22-19 10:34	6 ft	634914-018
BH02C	S	08-22-19 10:35	9 ft	634914-019
BH03	S	08-22-19 10:48	1 ft	634914-020
BH03A	S	08-22-19 10:49	3 ft	634914-021
BH03B	S	08-22-19 11:02	6 ft	634914-022
BH03C	S	08-22-19 11:03	9 ft	634914-023

Sample receipt non conformances and comments:

CLIENT REQUESTED RE RUN ON SAMPLE 019 FOR CHLORIDE. REPORTED RE RUN, NEW VERSION GENERATED JK 08/27/19
Client requested sample name change. New Version generated. JK 09/10/19
FS04 --> FS04A
FS14 --> FS14A
FS15 --> FS15A

Client requested sample name change. NEW VERSION GENERATED JK 09/10/19
FS04A --> FS01A
FS14A --> FS11A
FS15A --> FS12A

Per clients email, corrected sample 001 depth from 8' to 10' NEW VERSION GENERATED JK 09/11/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099408 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634867-001 S.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634867-001 S,634867-001 SD.
Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634867-001 SD.

Batch: LBA-3099410 Chloride by EPA 300
Lab Sample ID 634914-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634914-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3099413 Chloride by EPA 300
Lab Sample ID 634914-023 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634914-016, -017, -018, -019, -020, -021, -022, -023.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3099510 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634914-008,634914-014,634914-012.

Batch: LBA-3099529 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; data confirmed by re-analysis.
Samples affected are: 634914-007 SD,634914-008.

Batch: LBA-3099530 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634914-012,634914-015,634914-013,634914-014.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 634914

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-22-19 04:07 pm
Report Date: 11-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634914-001		634914-002		634914-003		634914-004		634914-005		634914-006	
	Field Id:	FS01A		FS11A		FS12A		SW13		SW14		SW15	
	Depth:	10- ft		10- ft		10- ft		0-9 ft		0-9 ft		0-9 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-20-19 10:25		Aug-21-19 12:10		Aug-21-19 12:16		Aug-21-19 15:06		Aug-21-19 15:18		Aug-21-19 15:26	
BTEX by EPA 8021B	***Extracted:***	Aug-22-19 17:30		Aug-22-19 17:30		Aug-22-19 17:30		Aug-22-19 17:30		Aug-22-19 17:30		Aug-22-19 17:30	
	Analyzed:	Aug-23-19 03:56		Aug-23-19 04:16		Aug-23-19 04:35		Aug-23-19 04:55		Aug-23-19 05:15		Aug-23-19 05:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
Toluene		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
Ethylbenzene		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
m,p-Xylenes		<0.00203	0.00203	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
o-Xylene		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
Total Xylenes		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
Total BTEX		<0.00101	0.00101	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.000994	0.000994
Chloride by EPA 300	***Extracted:***	Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08	
	Analyzed:	Aug-22-19 19:20		Aug-22-19 19:26		Aug-22-19 19:32		Aug-22-19 19:37		Aug-22-19 19:43		Aug-22-19 19:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		13300	500	3650	99.2	4730	99.0	187	9.90	43.4	9.90	<10.0	10.0
TPH by SW8015 Mod	***Extracted:***	Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00	
	Analyzed:	Aug-22-19 21:49		Aug-22-19 22:50		Aug-22-19 23:10		Aug-22-19 23:30		Aug-22-19 23:50		Aug-23-19 00:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9
Total TPH		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9
Total GRO-DRO		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.1	25.1	<24.9	24.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634914

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-22-19 04:07 pm
Report Date: 11-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634914-007		634914-008		634914-009		634914-010		634914-011		634914-012	
	Field Id:	SW16		SW17		SW18		SW19		SW20		BH01	
	Depth:	0-9 ft		0-9 ft		0-9 ft		0-9 ft		0-9 ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-21-19 15:41		Aug-22-19 11:30		Aug-22-19 11:35		Aug-22-19 11:49		Aug-22-19 11:51		Aug-22-19 09:38	
BTEX by EPA 8021B	***Extracted:***	Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 14:08	
	Analyzed:	Aug-23-19 11:22		Aug-23-19 11:42		Aug-23-19 12:02		Aug-23-19 12:26		Aug-23-19 12:46		Aug-24-19 17:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.500	0.500
Toluene		<0.00100	0.00100	0.0289	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	0.770	0.500
Ethylbenzene		<0.00100	0.00100	0.0530	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	1.69	0.500
m,p-Xylenes		<0.00201	0.00201	0.280	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	9.01	1.00
o-Xylene		<0.00100	0.00100	0.149	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	2.53	0.500
Total Xylenes		<0.00100	0.00100	0.429	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	11.5	0.500
Total BTEX		<0.00100	0.00100	0.511	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	14.0	0.500
Chloride by EPA 300	***Extracted:***	Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08	
	Analyzed:	Aug-22-19 19:55		Aug-22-19 20:00		Aug-22-19 20:06		Aug-22-19 20:12		Aug-22-19 20:35		Aug-22-19 20:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.6	9.98	15800	992	11600	491	941	19.8	1150	19.6	1320	50.1
TPH by SW8015 Mod	***Extracted:***	Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00	
	Analyzed:	Aug-23-19 00:30		Aug-23-19 00:50		Aug-23-19 01:10		Aug-23-19 01:31		Aug-23-19 02:11		Aug-23-19 02:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.1	25.1	268	24.9	<24.9	24.9	<25.0	25.0	<25.1	25.1	446	25.0
Diesel Range Organics (DRO)		<25.1	25.1	2310	24.9	<24.9	24.9	<25.0	25.0	<25.1	25.1	4880	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.1	25.1	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.1	25.1	<25.0	25.0
Total TPH		<25.1	25.1	2580	24.9	<24.9	24.9	<25.0	25.0	<25.1	25.1	5330	25.0
Total GRO-DRO		<25.1	25.1	2580	24.9	<24.9	24.9	<25.0	25.0	<25.1	25.1	5330	25.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634914

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-22-19 04:07 pm
Report Date: 11-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634914-013		634914-014		634914-015		634914-016		634914-017		634914-018	
	Field Id:	BH01A		BH01B		BH01C		BH02		BH02A		BH02B	
	Depth:	3- ft		6- ft		9- ft		1- ft		3- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-22-19 09:43		Aug-22-19 09:58		Aug-22-19 10:01		Aug-22-19 10:17		Aug-22-19 10:18		Aug-22-19 10:34	
BTEX by EPA 8021B	***Extracted:***	Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 07:08		Aug-23-19 07:08	
	Analyzed:	Aug-24-19 18:11		Aug-24-19 17:32		Aug-24-19 18:31		Aug-24-19 18:51		Aug-23-19 15:26		Aug-23-19 15:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.500	0.500	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990	<0.000992	0.000992
Toluene		0.00745	0.00100	1.05	0.500	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990	<0.000992	0.000992
Ethylbenzene		0.0197	0.00100	1.73	0.500	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990	<0.000992	0.000992
m,p-Xylenes		0.112	0.00200	9.53	1.00	<0.00201	0.00201	<0.00200	0.00200	0.00254	0.00198	<0.00198	0.00198
o-Xylene		0.0543	0.00100	4.44	0.500	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990	<0.000992	0.000992
Total Xylenes		0.166	0.00100	14.0	0.500	<0.00100	0.00100	<0.000998	0.000998	0.00254	0.000990	<0.000992	0.000992
Total BTEX		0.193	0.00100	16.8	0.500	<0.00100	0.00100	<0.000998	0.000998	0.00254	0.000990	<0.000992	0.000992
Chloride by EPA 300	***Extracted:***	Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 17:08		Aug-22-19 18:08		Aug-22-19 18:08		Aug-22-19 18:08	
	Analyzed:	Aug-22-19 20:47		Aug-22-19 20:52		Aug-22-19 20:58		Aug-22-19 21:50		Aug-22-19 21:56		Aug-22-19 22:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9640	199	24200	2500	23900	2490	16.8	10.0	66.8	10.0	5480	100
TPH by SW8015 Mod	***Extracted:***	Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00		Aug-22-19 17:00	
	Analyzed:	Aug-23-19 02:51		Aug-23-19 03:11		Aug-23-19 03:32		Aug-23-19 03:52		Aug-23-19 04:12		Aug-23-19 04:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		79.0	24.9	561	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Diesel Range Organics (DRO)		1930	24.9	5100	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	88.4	25.1
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Total TPH		2010	24.9	5660	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	88.4	25.1
Total GRO-DRO		2010	24.9	5660	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	88.4	25.1

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634914

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-22-19 04:07 pm
Report Date: 11-SEP-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	634914-019		634914-020		634914-021		634914-022		634914-023	
	Field Id:	BH02C		BH03		BH03A		BH03B		BH03C	
	Depth:	9- ft		1- ft		3- ft		6- ft		9- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-22-19 10:35		Aug-22-19 10:48		Aug-22-19 10:49		Aug-22-19 11:02		Aug-22-19 11:03	
BTEX by EPA 8021B	***Extracted:***	Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08		Aug-23-19 07:08	
	Analyzed:	Aug-23-19 16:06		Aug-23-19 16:25		Aug-23-19 16:45		Aug-23-19 17:06		Aug-23-19 17:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
Toluene		0.00133	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
Ethylbenzene		0.00377	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
m,p-Xylenes		0.0240	0.00202	0.00457	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202
o-Xylene		0.00877	0.00101	0.00139	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
Total Xylenes		0.0328	0.00101	0.00596	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
Total BTEX		0.0379	0.00101	0.00596	0.00100	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101
Chloride by EPA 300	***Extracted:***	Aug-22-19 18:08		Aug-22-19 18:08		Aug-22-19 18:08		Aug-22-19 18:08		Aug-22-19 18:08	
	Analyzed:	Aug-22-19 22:07		Aug-22-19 22:13		Aug-22-19 22:19		Aug-22-19 22:42		Aug-22-19 22:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		27400 D	2470	57.9	10.0	13.0	10.0	3970	100	23700	2500
TPH by SW8015 Mod	***Extracted:***	Aug-22-19 17:00		Aug-22-19 17:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00	
	Analyzed:	Aug-23-19 04:52		Aug-23-19 05:12		Aug-23-19 11:50		Aug-23-19 12:50		Aug-23-19 13:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Diesel Range Organics (DRO)		380	24.9	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Total TPH		380	24.9	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1
Total GRO-DRO		380	24.9	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.1	25.1

Jessica Kramer
Project Assistant

Certificate of Analytical Results 634914

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-001	Date Collected:	08.20.19 10.25	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13300**	500	mg/kg	08.22.19 19.20		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 21.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 21.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 21.49	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 21.49	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 21.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.22.19 21.49	
o-Terphenyl	84-15-1	98	%	70-135	08.22.19 21.49	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**FS01A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-001	Date Collected:	08.20.19 10.25	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1
m,p-Xylenes	179601-23-1	<0.00203	0.00203	mg/kg	08.23.19 03.56	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 03.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.23.19 03.56	
1,4-Difluorobenzene	540-36-3	110	%	80-120	08.23.19 03.56	

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Sample Id:	**FS11A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-002	Date Collected:	08.21.19 12.10	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3650**	99.2	mg/kg	08.22.19 19.26		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 22.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 22.50	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 22.50	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.22.19 22.50	
o-Terphenyl	84-15-1	94	%	70-135	08.22.19 22.50	

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PLU 421

Sample Id:	**FS11A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-002	Date Collected:	08.21.19 12.10	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.23.19 04.16	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.23.19 04.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.23.19 04.16	
4-Bromofluorobenzene	460-00-4	117	%	80-120	08.23.19 04.16	

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Sample Id:	**FS12A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-003	Date Collected:	08.21.19 12.16	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4730**	99.0	mg/kg	08.22.19 19.32		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 23.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 23.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 23.10	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 23.10	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 23.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.22.19 23.10	
o-Terphenyl	84-15-1	85	%	70-135	08.22.19 23.10	

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Sample Id:	**FS12A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-003	Date Collected:	08.21.19 12.16	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.23.19 04.35	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.23.19 04.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.23.19 04.35	
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.23.19 04.35	

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PLU 421

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-004	Date Collected:	08.21.19 15.06	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**187**	9.90	mg/kg	08.22.19 19.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 23.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 23.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 23.30	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 23.30	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 23.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.22.19 23.30	
o-Terphenyl	84-15-1	98	%	70-135	08.22.19 23.30	

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PLU 421

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-004	Date Collected:	08.21.19 15.06	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.23.19 04.55	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.23.19 04.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	08.23.19 04.55	
1,4-Difluorobenzene	540-36-3	106	%	80-120	08.23.19 04.55	

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Sample Id:	**SW14**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-005	Date Collected:	08.21.19 15.18	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.4**	9.90	mg/kg	08.22.19 19.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.22.19 23.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.22.19 23.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.22.19 23.50	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.22.19 23.50	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.22.19 23.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.22.19 23.50	
o-Terphenyl	84-15-1	88	%	70-135	08.22.19 23.50	

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Sample Id:	**SW14**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-005	Date Collected:	08.21.19 15.18	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.23.19 05.15	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.23.19 05.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	80-120	08.23.19 05.15	
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.23.19 05.15	

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Sample Id:	**SW15**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-006	Date Collected:	08.21.19 15.26	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	08.22.19 19.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 00.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 00.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 00.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 00.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.23.19 00.10	
o-Terphenyl	84-15-1	96	%	70-135	08.23.19 00.10	

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Sample Id:	**SW15**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-006	Date Collected:	08.21.19 15.26	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.30	Basis:	Wet Weight
Seq Number:	3099408				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.23.19 05.35	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.23.19 05.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	80-120	08.23.19 05.35	
1,4-Difluorobenzene	540-36-3	109	%	80-120	08.23.19 05.35	

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Sample Id:	**SW16**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-007	Date Collected:	08.21.19 15.41	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.6**	9.98	mg/kg	08.22.19 19.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 00.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 00.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 00.30	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 00.30	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 00.30	
o-Terphenyl	84-15-1	92	%	70-135	08.23.19 00.30	

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Sample Id:	**SW16**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-007	Date Collected:	08.21.19 15.41	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.23.19 11.22	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.23.19 11.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.23.19 11.22	
4-Bromofluorobenzene	460-00-4	113	%	80-120	08.23.19 11.22	

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Sample Id:	**SW17**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-008	Date Collected:	08.22.19 11.30	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15800**	992	mg/kg	08.22.19 20.00		100

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**268**	24.9	mg/kg	08.23.19 00.50		1
Diesel Range Organics (DRO)	C10C28DRO	**2310**	24.9	mg/kg	08.23.19 00.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 00.50	U	1
Total TPH	PHC635	**2580**	24.9	mg/kg	08.23.19 00.50		1
Total GRO-DRO	PHC628	**2580**	24.9	mg/kg	08.23.19 00.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	08.23.19 00.50	
o-Terphenyl	84-15-1	150	%	70-135	08.23.19 00.50	**

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW17**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-008	Date Collected:	08.22.19 11.30	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 11.42	U	1
Toluene	108-88-3	**0.0289**	0.00100	mg/kg	08.23.19 11.42		1
Ethylbenzene	100-41-4	**0.0530**	0.00100	mg/kg	08.23.19 11.42		1
m,p-Xylenes	179601-23-1	**0.280**	0.00201	mg/kg	08.23.19 11.42		1
o-Xylene	95-47-6	**0.149**	0.00100	mg/kg	08.23.19 11.42		1
Total Xylenes	1330-20-7	**0.429**	0.00100	mg/kg	08.23.19 11.42		1
Total BTEX		**0.511**	0.00100	mg/kg	08.23.19 11.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	80-120	08.23.19 11.42	
4-Bromofluorobenzene	460-00-4	146	%	80-120	08.23.19 11.42	**

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-009	Date Collected:	08.22.19 11.35	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11600**	491	mg/kg	08.22.19 20.06		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 01.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 01.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 01.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 01.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 01.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 01.10	
o-Terphenyl	84-15-1	94	%	70-135	08.23.19 01.10	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-009	Date Collected:	08.22.19 11.35	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.23.19 12.02	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.23.19 12.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	80-120	08.23.19 12.02	
4-Bromofluorobenzene	460-00-4	116	%	80-120	08.23.19 12.02	

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PLU 421

Sample Id:	**SW19**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-010	Date Collected:	08.22.19 11.49	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**941**	19.8	mg/kg	08.22.19 20.12		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 01.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 01.31	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 01.31	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.23.19 01.31	
o-Terphenyl	84-15-1	91	%	70-135	08.23.19 01.31	

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PLU 421

Sample Id:	**SW19**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-010	Date Collected:	08.22.19 11.49	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.23.19 12.26	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 12.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.23.19 12.26	
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.23.19 12.26	

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PLU 421

Sample Id:	**SW20**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-011	Date Collected:	08.22.19 11.51	Sample Depth:	0 - 9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1150**	19.6	mg/kg	08.22.19 20.35		2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 02.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 02.11	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 02.11	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.23.19 02.11	
o-Terphenyl	84-15-1	95	%	70-135	08.23.19 02.11	

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Sample Id:	**SW20**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-011	Date Collected:	08.22.19 11.51	Sample Depth:	0 - 9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.23.19 12.46	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 12.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	80-120	08.23.19 12.46	
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.23.19 12.46	

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PLU 421

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-012	Date Collected:	08.22.19 09.38	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1320**	50.1	mg/kg	08.22.19 20.41		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**446**	25.0	mg/kg	08.23.19 02.31		1
Diesel Range Organics (DRO)	C10C28DRO	**4880**	25.0	mg/kg	08.23.19 02.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 02.31	U	1
Total TPH	PHC635	**5330**	25.0	mg/kg	08.23.19 02.31		1
Total GRO-DRO	PHC628	**5330**	25.0	mg/kg	08.23.19 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	08.23.19 02.31	
o-Terphenyl	84-15-1	226	%	70-135	08.23.19 02.31	**

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-012	Date Collected:	08.22.19 09.38	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.500	0.500	mg/kg	08.24.19 17.12	U	500
Toluene	108-88-3	**0.770**	0.500	mg/kg	08.24.19 17.12		500
Ethylbenzene	100-41-4	**1.69**	0.500	mg/kg	08.24.19 17.12		500
m,p-Xylenes	179601-23-1	**9.01**	1.00	mg/kg	08.24.19 17.12		500
o-Xylene	95-47-6	**2.53**	0.500	mg/kg	08.24.19 17.12		500
Total Xylenes	1330-20-7	**11.5**	0.500	mg/kg	08.24.19 17.12		500
Total BTEX		**14.0**	0.500	mg/kg	08.24.19 17.12		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.24.19 17.12	
4-Bromofluorobenzene	460-00-4	124	%	80-120	08.24.19 17.12	**

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PLU 421

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-013	Date Collected:	08.22.19 09.43	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9640**	199	mg/kg	08.22.19 20.47		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**79.0**	24.9	mg/kg	08.23.19 02.51		1
Diesel Range Organics (DRO)	C10C28DRO	**1930**	24.9	mg/kg	08.23.19 02.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 02.51	U	1
Total TPH	PHC635	**2010**	24.9	mg/kg	08.23.19 02.51		1
Total GRO-DRO	PHC628	**2010**	24.9	mg/kg	08.23.19 02.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.23.19 02.51	
o-Terphenyl	84-15-1	126	%	70-135	08.23.19 02.51	

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PLU 421

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-013	Date Collected:	08.22.19 09.43	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 18.11	U	1
Toluene	108-88-3	**0.00745**	0.00100	mg/kg	08.24.19 18.11		1
Ethylbenzene	100-41-4	**0.0197**	0.00100	mg/kg	08.24.19 18.11		1
m,p-Xylenes	179601-23-1	**0.112**	0.00200	mg/kg	08.24.19 18.11		1
o-Xylene	95-47-6	**0.0543**	0.00100	mg/kg	08.24.19 18.11		1
Total Xylenes	1330-20-7	**0.166**	0.00100	mg/kg	08.24.19 18.11		1
Total BTEX		**0.193**	0.00100	mg/kg	08.24.19 18.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	222	%	80-120	08.24.19 18.11	**
1,4-Difluorobenzene	540-36-3	120	%	80-120	08.24.19 18.11	

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PLU 421

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-014	Date Collected:	08.22.19 09.58	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24200**	2500	mg/kg	08.22.19 20.52		250

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**561**	25.0	mg/kg	08.23.19 03.11		1
Diesel Range Organics (DRO)	C10C28DRO	**5100**	25.0	mg/kg	08.23.19 03.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 03.11	U	1
Total TPH	PHC635	**5660**	25.0	mg/kg	08.23.19 03.11		1
Total GRO-DRO	PHC628	**5660**	25.0	mg/kg	08.23.19 03.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	08.23.19 03.11	
o-Terphenyl	84-15-1	200	%	70-135	08.23.19 03.11	**

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PLU 421

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-014	Date Collected:	08.22.19 09.58	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.500	0.500	mg/kg	08.24.19 17.32	U	500
Toluene	108-88-3	**1.05**	0.500	mg/kg	08.24.19 17.32		500
Ethylbenzene	100-41-4	**1.73**	0.500	mg/kg	08.24.19 17.32		500
m,p-Xylenes	179601-23-1	**9.53**	1.00	mg/kg	08.24.19 17.32		500
o-Xylene	95-47-6	**4.44**	0.500	mg/kg	08.24.19 17.32		500
Total Xylenes	1330-20-7	**14.0**	0.500	mg/kg	08.24.19 17.32		500
Total BTEX		**16.8**	0.500	mg/kg	08.24.19 17.32		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	80-120	08.24.19 17.32	**
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.24.19 17.32	

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PLU 421

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-015	Date Collected:	08.22.19 10.01	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 17.08	Basis:	Wet Weight
Seq Number:	3099410				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23900**	2490	mg/kg	08.22.19 20.58		250

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 03.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 03.32	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 03.32	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.23.19 03.32	
o-Terphenyl	84-15-1	104	%	70-135	08.23.19 03.32	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-015	Date Collected:	08.22.19 10.01	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.24.19 18.31	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	80-120	08.24.19 18.31	
4-Bromofluorobenzene	460-00-4	123	%	80-120	08.24.19 18.31	**

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-016	Date Collected:	08.22.19 10.17	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.8**	10.0	mg/kg	08.22.19 21.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 03.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 03.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 03.52	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 03.52	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 03.52	
o-Terphenyl	84-15-1	93	%	70-135	08.23.19 03.52	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-016	Date Collected:	08.22.19 10.17	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.24.19 18.51	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.24.19 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.24.19 18.51	
4-Bromofluorobenzene	460-00-4	104	%	80-120	08.24.19 18.51	

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PLU 421

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-017	Date Collected:	08.22.19 10.18	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.8**	10.0	mg/kg	08.22.19 21.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 04.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 04.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 04.12	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 04.12	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 04.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.23.19 04.12	
o-Terphenyl	84-15-1	93	%	70-135	08.23.19 04.12	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-017	Date Collected:	08.22.19 10.18	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.23.19 15.26	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.23.19 15.26	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.23.19 15.26	U	1
m,p-Xylenes	179601-23-1	**0.00254**	0.00198	mg/kg	08.23.19 15.26		1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.23.19 15.26	U	1
Total Xylenes	1330-20-7	**0.00254**	0.000990	mg/kg	08.23.19 15.26		1
Total BTEX		**0.00254**	0.000990	mg/kg	08.23.19 15.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	80-120	08.23.19 15.26	
4-Bromofluorobenzene	460-00-4	117	%	80-120	08.23.19 15.26	

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PLU 421

Sample Id:	**BH02B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-018	Date Collected:	08.22.19 10.34	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5480**	100	mg/kg	08.22.19 22.01		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 04.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**88.4**	25.1	mg/kg	08.23.19 04.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 04.32	U	1
Total TPH	PHC635	**88.4**	25.1	mg/kg	08.23.19 04.32		1
Total GRO-DRO	PHC628	**88.4**	25.1	mg/kg	08.23.19 04.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.23.19 04.32	
o-Terphenyl	84-15-1	101	%	70-135	08.23.19 04.32	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH02B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-018	Date Collected:	08.22.19 10.34	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.23.19 15.46	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1
Total BTEX		<0.000992	0.000992	mg/kg	08.23.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.23.19 15.46	
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.23.19 15.46	

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PLU 421

Sample Id:	**BH02C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-019	Date Collected:	08.22.19 10.35	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27400**	2470	mg/kg	08.26.19 15.30	D	250

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 04.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**380**	24.9	mg/kg	08.23.19 04.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 04.52	U	1
Total TPH	PHC635	**380**	24.9	mg/kg	08.23.19 04.52		1
Total GRO-DRO	PHC628	**380**	24.9	mg/kg	08.23.19 04.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.23.19 04.52	
o-Terphenyl	84-15-1	130	%	70-135	08.23.19 04.52	

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PLU 421

Sample Id:	**BH02C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-019	Date Collected:	08.22.19 10.35	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 16.06	U	1
Toluene	108-88-3	**0.00133**	0.00101	mg/kg	08.23.19 16.06		1
Ethylbenzene	100-41-4	**0.00377**	0.00101	mg/kg	08.23.19 16.06		1
m,p-Xylenes	179601-23-1	**0.0240**	0.00202	mg/kg	08.23.19 16.06		1
o-Xylene	95-47-6	**0.00877**	0.00101	mg/kg	08.23.19 16.06		1
Total Xylenes	1330-20-7	**0.0328**	0.00101	mg/kg	08.23.19 16.06		1
Total BTEX		**0.0379**	0.00101	mg/kg	08.23.19 16.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.23.19 16.06	
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.23.19 16.06	

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PLU 421

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-020	Date Collected:	08.22.19 10.48	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.9**	10.0	mg/kg	08.22.19 22.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 17.00	Basis:	Wet Weight
Seq Number:	3099510				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 05.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 05.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 05.12	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 05.12	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 05.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.23.19 05.12	
o-Terphenyl	84-15-1	90	%	70-135	08.23.19 05.12	

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PLU 421

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-020	Date Collected:	08.22.19 10.48	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.23.19 16.25	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.23.19 16.25	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.23.19 16.25	U	1
m,p-Xylenes	179601-23-1	**0.00457**	0.00200	mg/kg	08.23.19 16.25		1
o-Xylene	95-47-6	**0.00139**	0.00100	mg/kg	08.23.19 16.25		1
Total Xylenes	1330-20-7	**0.00596**	0.00100	mg/kg	08.23.19 16.25		1
Total BTEX		**0.00596**	0.00100	mg/kg	08.23.19 16.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.23.19 16.25	
1,4-Difluorobenzene	540-36-3	112	%	80-120	08.23.19 16.25	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-021	Date Collected:	08.22.19 10.49	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.0**	10.0	mg/kg	08.22.19 22.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.23.19 10.00	Basis:	Wet Weight
Seq Number:	3099584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 11.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 11.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 11.50	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 11.50	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 11.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.23.19 11.50	
o-Terphenyl	84-15-1	91	%	70-135	08.23.19 11.50	

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PLU 421

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-021	Date Collected:	08.22.19 10.49	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.23.19 16.45	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 16.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	80-120	08.23.19 16.45	
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.23.19 16.45	

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LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH03B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-022	Date Collected:	08.22.19 11.02	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3970**	100	mg/kg	08.22.19 22.42		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.23.19 10.00	Basis:	Wet Weight
Seq Number:	3099584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 12.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 12.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 12.50	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 12.50	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 12.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.23.19 12.50	
o-Terphenyl	84-15-1	94	%	70-135	08.23.19 12.50	

Certificate of Analytical Results 634914

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH03B**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-022	Date Collected:	08.22.19 11.02	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.23.19 17.06	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.23.19 17.06	
4-Bromofluorobenzene	460-00-4	117	%	80-120	08.23.19 17.06	

Certificate of Analytical Results 634914

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH03C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-023	Date Collected:	08.22.19 11.03	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.22.19 18.08	Basis:	Wet Weight
Seq Number:	3099413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23700**	2500	mg/kg	08.22.19 22.48		250

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.23.19 10.00	Basis:	Wet Weight
Seq Number:	3099584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 13.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 13.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 13.10	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 13.10	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 13.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 13.10	
o-Terphenyl	84-15-1	93	%	70-135	08.23.19 13.10	

Certificate of Analytical Results 634914

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH03C**	Matrix:	Soil	Date Received:	08.22.19 16.07
Lab Sample Id:	634914-023	Date Collected:	08.22.19 11.03	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 07.08	Basis:	Wet Weight
Seq Number:	3099529				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.23.19 17.26	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.23.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	80-120	08.23.19 17.26	
1,4-Difluorobenzene	540-36-3	109	%	80-120	08.23.19 17.26	

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 634914

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099410 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684792-1-BLK LCS Sample Id: 7684792-1-BKS LCSD Sample Id: 7684792-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	220	110	220	110	80-120	0	20	mg/kg	08.22.19 18:18	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099413 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684796-1-BLK LCS Sample Id: 7684796-1-BKS LCSD Sample Id: 7684796-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	220	110	220	110	80-120	0	20	mg/kg	08.22.19 21:38	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099410 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634895-001 MS Sample Id: 634895-001 S MSD Sample Id: 634895-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.39	200	224	110	224	110	80-120	0	20	mg/kg	08.22.19 18:36	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099410 Matrix: Solid Date Prep: 08.22.19
Parent Sample Id: 634914-015 MS Sample Id: 634914-015 S MSD Sample Id: 634914-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23900	50000	86600	125	85600	123	80-120	1	20	mg/kg	08.22.19 21:04	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099413 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634914-023 MS Sample Id: 634914-023 S MSD Sample Id: 634914-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23700	50000	85100	123	90700	134	80-120	6	20	mg/kg	08.22.19 22:53	X

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 634914

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099510 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684900-1-BLK LCS Sample Id: 7684900-1-BKS LCSD Sample Id: 7684900-1-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)	<9.88	1000	960	96	958	96	70-135	0	35	mg/kg	08.22.19 21:09	
Diesel Range Organics (DRO)	<9.88	1000	939	94	941	94	70-135	0	35	mg/kg	08.22.19 21:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		111		109		70-135	%	08.22.19 21:09
o-Terphenyl	87		104		106		70-135	%	08.22.19 21:09

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684955-1-BLK LCS Sample Id: 7684955-1-BKS LCSD Sample Id: 7684955-1-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)	<9.88	1000	1020	102	999	100	70-135	2	35	mg/kg	08.23.19 11:09	
Diesel Range Organics (DRO)	<9.88	1000	1010	101	998	100	70-135	1	35	mg/kg	08.23.19 11:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		126		121		70-135	%	08.23.19 11:09
o-Terphenyl	109		117		114		70-135	%	08.23.19 11:09

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099510 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634914-001 MS Sample Id: 634914-001 S MSD Sample Id: 634914-001 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)	<9.91	1000	1090	109	970	97	70-135	12	35	mg/kg	08.22.19 22:09	
Diesel Range Organics (DRO)	<9.91	1000	1080	108	942	94	70-135	14	35	mg/kg	08.22.19 22:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		114		70-135	%	08.22.19 22:09
o-Terphenyl	120		107		70-135	%	08.22.19 22:09

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 634914

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634914-021 MS Sample Id: 634914-021 S MSD Sample Id: 634914-021 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)	<9.92	1000	1010	101	982	98	70-135	3	35	mg/kg	08.23.19 12:10	
Diesel Range Organics (DRO)	<9.92	1000	1030	103	956	96	70-135	7	35	mg/kg	08.23.19 12:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		126		70-135	%	08.23.19 12:10
o-Terphenyl	109		107		70-135	%	08.23.19 12:10

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099408 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684827-1-BLK LCS Sample Id: 7684827-1-BKS LCSD Sample Id: 7684827-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.101	101	0.0990	99	70-130	2	35	mg/kg	08.22.19 20:40	
Toluene	<0.00100	0.100	0.0902	90	0.0898	90	70-130	0	35	mg/kg	08.22.19 20:40	
Ethylbenzene	<0.00100	0.100	0.119	119	0.0946	95	71-129	23	35	mg/kg	08.22.19 20:40	
m,p-Xylenes	<0.00200	0.200	0.188	94	0.174	87	70-135	8	35	mg/kg	08.22.19 20:40	
o-Xylene	<0.00100	0.100	0.112	112	0.0868	87	71-133	25	35	mg/kg	08.22.19 20:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		102		111		80-120	%	08.22.19 20:40
4-Bromofluorobenzene	117		103		118		80-120	%	08.22.19 20:40

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099529 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684918-1-BLK LCS Sample Id: 7684918-1-BKS LCSD Sample Id: 7684918-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0909	91	0.0912	91	70-130	0	35	mg/kg	08.23.19 09:22	
Toluene	<0.000500	0.100	0.0950	95	0.0973	97	70-130	2	35	mg/kg	08.23.19 09:22	
Ethylbenzene	<0.000500	0.100	0.104	104	0.107	107	71-129	3	35	mg/kg	08.23.19 09:22	
m,p-Xylenes	<0.00100	0.200	0.215	108	0.219	110	70-135	2	35	mg/kg	08.23.19 09:22	
o-Xylene	0.000530	0.100	0.106	106	0.108	108	71-133	2	35	mg/kg	08.23.19 09:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		93		101		80-120	%	08.23.19 09:22
4-Bromofluorobenzene	115		117		118		80-120	%	08.23.19 09:22

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 634914

LT Environmental, Inc.

PLU 421

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099530 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684919-1-BLK LCS Sample Id: 7684919-1-BKS LCSD Sample Id: 7684919-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0902	90	0.0906	91	70-130	0	35	mg/kg	08.23.19 19:45	
Toluene	<0.00100	0.100	0.0999	100	0.0950	95	70-130	5	35	mg/kg	08.23.19 19:45	
Ethylbenzene	<0.00100	0.100	0.114	114	0.110	110	71-129	4	35	mg/kg	08.23.19 19:45	
m,p-Xylenes	<0.00200	0.200	0.231	116	0.226	113	70-135	2	35	mg/kg	08.23.19 19:45	
o-Xylene	<0.00100	0.100	0.114	114	0.112	112	71-133	2	35	mg/kg	08.23.19 19:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		106		101		80-120	%	08.23.19 19:45
4-Bromofluorobenzene	118		112		114		80-120	%	08.23.19 19:45

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099408 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634867-001 MS Sample Id: 634867-001 S MSD Sample Id: 634867-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0983	97	0.0943	94	70-130	4	35	mg/kg	08.22.19 21:19	
Toluene	<0.000504	0.101	0.0919	91	0.0956	96	70-130	4	35	mg/kg	08.22.19 21:19	
Ethylbenzene	<0.000504	0.101	0.116	115	0.123	123	71-129	6	35	mg/kg	08.22.19 21:19	
m,p-Xylenes	<0.00101	0.202	0.179	89	0.176	88	70-135	2	35	mg/kg	08.22.19 21:19	
o-Xylene	<0.000504	0.101	0.129	128	0.0930	93	71-133	32	35	mg/kg	08.22.19 21:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	0	**	121	**	80-120	%	08.22.19 21:19
4-Bromofluorobenzene	124	**	125	**	80-120	%	08.22.19 21:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099529 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634914-007 MS Sample Id: 634914-007 S MSD Sample Id: 634914-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0866	86	0.0923	91	70-130	6	35	mg/kg	08.23.19 10:02	
Toluene	<0.000504	0.101	0.0910	90	0.0973	96	70-130	7	35	mg/kg	08.23.19 10:02	
Ethylbenzene	<0.000504	0.101	0.0999	99	0.107	106	71-129	7	35	mg/kg	08.23.19 10:02	
m,p-Xylenes	<0.00101	0.202	0.205	101	0.218	108	70-135	6	35	mg/kg	08.23.19 10:02	
o-Xylene	<0.000504	0.101	0.102	101	0.108	107	71-133	6	35	mg/kg	08.23.19 10:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		99		80-120	%	08.23.19 10:02
4-Bromofluorobenzene	114		122	**	80-120	%	08.23.19 10:02

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 634914

LT Environmental, Inc.

PLU 421

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

Seq Number: 3099530 Matrix: Soil Date Prep: 08.23.19

Parent Sample Id: 634675-001 MS Sample Id: 634675-001 S MSD Sample Id: 634675-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000996	0.0996	0.0893	90	0.0936	94	70-130	5	35	mg/kg	08.23.19 20:25	
Toluene	0.110	0.0996	0.127	17	0.121	11	70-130	5	35	mg/kg	08.23.19 20:25	X
Ethylbenzene	0.204	0.0996	0.204	0	0.188	0	71-129	8	35	mg/kg	08.23.19 20:25	X
m,p-Xylenes	0.690	0.199	0.622	0	0.567	0	70-135	9	35	mg/kg	08.23.19 20:25	X
o-Xylene	0.392	0.0996	0.363	0	0.333	0	71-133	9	35	mg/kg	08.23.19 20:25	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		114		80-120	%	08.23.19 20:25
4-Bromofluorobenzene	119		117		80-120	%	08.23.19 20:25

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

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

Work Order No: 634914

Page 1 of 3

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date: 8/26/19	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.0	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	23

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS04	S	08/20/19	1025	8'	1	X	X	X
FS14		08/21/19	1210	10'				
FS15		08/21/19	1216	10'				
SW13		08/21/19	1506	0-9'				
SW14		08/21/19	1518	0-9'				
SW15		08/21/19	1526	0-9'				
SW16		08/21/19	1541	0-9'				
SW17		08/22/19	1130	0-9'				
SW18		08/22/19	1135	0-9'				
SW19	↓	08/22/19	1149	0-9'	↓	↓	↓	↓

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Fatima		8/22/19 16:07	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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: 634914

www.xenco.com Page 2 of 3

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24hrs	
Sampler's Name:	Fatima Smith	Due Date: 8/26/19	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID	see PO	
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 (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW20	S	08/22/19	1151	0-9'	1	X	X	X
BH01			0938	1'				
BH01A			0943	3'				
BH01B			0958	6'				
BH01C			1001	9'				
BH02			1017	1'				
BH02A			1018	3'				
BH02B			1034	6'				
BH02C			1035	9'				
BH03			1048	1'				

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima Smith		8/22/19 10:17	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

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: 34914

www.xenco.com Page 3 of 3

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:		fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24hrs	
Sampler's Name:	Fatima Smith	Due Date: 8/26/19	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID	see pg 1	
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 (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH03A	S	08/22/19	1049	3'	1	X	X	X
BH03B	S	08/22/19	1102	6'	1	X	X	X
BH03C	S	08/22/19	1103	9'	1	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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			8/22/19 16:07	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/22/2019 04:07:00 PM

Work Order #: 634914

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/22/2019

Checklist reviewed by: Jessica Kramer Date: 08/23/2019

Analytical Report 635205

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 421

012919160

28-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
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-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

28-AUG-19

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

Reference: XENCO Report No(s): **635205**
PLU 421
Project Address:

Dan Moir:

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) 635205. 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. 635205 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 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH 01	S	08-26-19 09:32	2 ft	635205-001
PH 01A	S	08-26-19 09:51	6 ft	635205-002
PH 02	S	08-26-19 11:07	6 ft	635205-003
PH 02A	S	08-26-19 12:23	9 ft	635205-004
BH 04	S	08-26-19 11:15	2 ft	635205-005
BH 04A	S	08-26-19 11:31	2.5 ft	635205-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099886 BTEX by EPA 8021B

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

Certificate of Analysis Summary 635205

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Aug-27-19 11:35 am
Report Date: 28-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635205-001		635205-002		635205-003		635205-004		635205-005		635205-006	
	Field Id:	PH 01		PH 01A		PH 02		PH 02A		BH 04		BH 04A	
	Depth:	2- ft		6- ft		6- ft		9- ft		2- ft		2.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-26-19 09:32		Aug-26-19 09:51		Aug-26-19 11:07		Aug-26-19 12:23		Aug-26-19 11:15		Aug-26-19 11:31	
BTEX by EPA 8021B	***Extracted:***	Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30	
	Analyzed:	Aug-27-19 12:54		Aug-27-19 14:14		Aug-27-19 14:33		Aug-27-19 14:53		Aug-27-19 15:13		Aug-27-19 15:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
Toluene		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
m,p-Xylenes		<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	<0.000988	0.000988	<0.000990	0.000990	<0.000998	0.000998	<0.000988	0.000988
Chloride by EPA 300	***Extracted:***	Aug-27-19 13:08		Aug-27-19 13:08		Aug-27-19 13:08		Aug-27-19 13:08		Aug-27-19 13:08		Aug-27-19 13:08	
	Analyzed:	Aug-27-19 15:41		Aug-27-19 15:59		Aug-27-19 16:05		Aug-27-19 16:10		Aug-27-19 16:16		Aug-27-19 16:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<10.0	10.0	168	9.88	16.8	9.90	<9.84	9.84	<9.88	9.88	17.2	9.88
TPH by SW8015 Mod	***Extracted:***	Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30		Aug-27-19 12:30	
	Analyzed:	Aug-27-19 15:18		Aug-27-19 16:19		Aug-27-19 16:39		Aug-27-19 17:00		Aug-27-19 17:20		Aug-27-19 17:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9
Total TPH		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 01**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-001	Date Collected:	08.26.19 09.32	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	08.27.19 15.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 15.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 15.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 15.18	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 15.18	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 15.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.27.19 15.18	
o-Terphenyl	84-15-1	100	%	70-135	08.27.19 15.18	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 01**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-001	Date Collected:	08.26.19 09.32	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.27.19 12.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.27.19 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.27.19 12.54	
1,4-Difluorobenzene	540-36-3	109	%	80-120	08.27.19 12.54	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 01A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-002	Date Collected:	08.26.19 09.51	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**168**	9.88	mg/kg	08.27.19 15.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.27.19 16.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.27.19 16.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.27.19 16.19	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.27.19 16.19	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.27.19 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.27.19 16.19	
o-Terphenyl	84-15-1	98	%	70-135	08.27.19 16.19	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 01A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-002	Date Collected:	08.26.19 09.51	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.27.19 14.14	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.27.19 14.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	80-120	08.27.19 14.14	
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.27.19 14.14	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 02**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-003	Date Collected:	08.26.19 11.07	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.8**	9.90	mg/kg	08.27.19 16.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 16.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 16.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 16.39	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 16.39	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 16.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.27.19 16.39	
o-Terphenyl	84-15-1	96	%	70-135	08.27.19 16.39	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 02**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-003	Date Collected:	08.26.19 11.07	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.27.19 14.33	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1
Total BTEX		<0.000988	0.000988	mg/kg	08.27.19 14.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	80-120	08.27.19 14.33	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.27.19 14.33	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 02A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-004	Date Collected:	08.26.19 12.23	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.84	9.84	mg/kg	08.27.19 16.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.27.19 17.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.27.19 17.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.27.19 17.00	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.27.19 17.00	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.27.19 17.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.27.19 17.00	
o-Terphenyl	84-15-1	96	%	70-135	08.27.19 17.00	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH 02A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-004	Date Collected:	08.26.19 12.23	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.27.19 14.53	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.27.19 14.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.27.19 14.53	
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.27.19 14.53	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH 04**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-005	Date Collected:	08.26.19 11.15	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	08.27.19 16.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.27.19 17.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.27.19 17.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.27.19 17.20	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.27.19 17.20	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.27.19 17.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	08.27.19 17.20	
o-Terphenyl	84-15-1	97	%	70-135	08.27.19 17.20	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH 04**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-005	Date Collected:	08.26.19 11.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.27.19 15.13	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.27.19 15.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	08.27.19 15.13	
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.27.19 15.13	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH 04A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-006	Date Collected:	08.26.19 11.31	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.2**	9.88	mg/kg	08.27.19 16.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.27.19 17.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.27.19 17.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.27.19 17.41	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.27.19 17.41	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.27.19 17.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.27.19 17.41	
o-Terphenyl	84-15-1	91	%	70-135	08.27.19 17.41	

Certificate of Analytical Results 635205

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**BH 04A**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635205-006	Date Collected:	08.26.19 11.31	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.27.19 15.32	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1
Total BTEX		<0.000988	0.000988	mg/kg	08.27.19 15.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	80-120	08.27.19 15.32	
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.27.19 15.32	

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 635205

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685067-1-BLK LCS Sample Id: 7685067-1-BKS LCSD Sample Id: 7685067-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	247	99	247	99	80-120	0	20	mg/kg	08.27.19 15:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.84	200	202	97	205	98	80-120	1	20	mg/kg	08.27.19 15:47	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635261-004 MS Sample Id: 635261-004 S MSD Sample Id: 635261-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	101	200	325	112	325	112	80-120	0	20	mg/kg	08.27.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685096-1-BLK LCS Sample Id: 7685096-1-BKS LCSD Sample Id: 7685096-1-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)	<25.0	1000	1100	110	1130	113	70-135	3	35	mg/kg	08.27.19 11:33	
Diesel Range Organics (DRO)	<9.88	1000	995	100	1020	102	70-135	2	35	mg/kg	08.27.19 11:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		122		121		70-135	%	08.27.19 11:33
o-Terphenyl	95		108		121		70-135	%	08.27.19 11:33

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 635205

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 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)	<25.0	1000	1030	103	1060	106	70-135	3	35	mg/kg	08.27.19 15:38	
Diesel Range Organics (DRO)	<9.88	1000	933	93	958	96	70-135	3	35	mg/kg	08.27.19 15:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		118		70-135	%	08.27.19 15:38
o-Terphenyl	103		109		70-135	%	08.27.19 15:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685106-1-BLK LCS Sample Id: 7685106-1-BKS LCSD Sample Id: 7685106-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0887	89	0.0821	82	70-130	8	35	mg/kg	08.27.19 10:25	
Toluene	<0.00100	0.100	0.0952	95	0.0894	89	70-130	6	35	mg/kg	08.27.19 10:25	
Ethylbenzene	<0.00100	0.100	0.105	105	0.0991	99	71-129	6	35	mg/kg	08.27.19 10:25	
m,p-Xylenes	<0.00100	0.200	0.220	110	0.207	104	70-135	6	35	mg/kg	08.27.19 10:25	
o-Xylene	<0.000500	0.100	0.109	109	0.102	102	71-133	7	35	mg/kg	08.27.19 10:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		105		80-120	%	08.27.19 10:25
4-Bromofluorobenzene	120		119		116		80-120	%	08.27.19 10:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0935	94	0.101	102	70-130	8	35	mg/kg	08.27.19 13:14	
Toluene	<0.000998	0.0998	0.0987	99	0.106	107	70-130	7	35	mg/kg	08.27.19 13:14	
Ethylbenzene	<0.000998	0.0998	0.110	110	0.118	119	71-129	7	35	mg/kg	08.27.19 13:14	
m,p-Xylenes	<0.000998	0.200	0.229	115	0.244	123	70-135	6	35	mg/kg	08.27.19 13:14	
o-Xylene	<0.000998	0.0998	0.114	114	0.122	123	71-133	7	35	mg/kg	08.27.19 13:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		111		80-120	%	08.27.19 13:14
4-Bromofluorobenzene	118		119		80-120	%	08.27.19 13:14

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: 635205

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@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 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date: 08/29/19	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.3	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	08/26/19	0932	2'	1	X	X	X
PH01A	S		0951	6'	1	X	X	X
PH02	S		1107	6'	1	X	X	X
PH02A	S		1223	9'	1	X	X	X
BH04	S		1115	2'	1	X	X	X
BH04A	S	V	1131	2.5'	1	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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			08/27/2019 9:00
3			
5			

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
2			08/27/2019 11:35
4			
6			

Analytical Report 635210

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 421

012919160

25-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
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-Tampa: Florida (E87429), North Carolina (483)

25-SEP-19

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

Reference: XENCO Report No(s): **635210**
PLU 421
Project Address:

Dan Moir:

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) 635210. 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. 635210 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 635210

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW21	S	08-26-19 12:58	0 - 6 ft	635210-001
SW22	S	08-26-19 13:12	0 - 6 ft	635210-002

Sample receipt non conformances and comments:

Per clients email, corrected sample names below. NEW VERSION GENERATED. JK 09/10/19
SW07 --> SW21
SW08 --> SW22

Per clients email, corrected sample depths to 0-6" NEW VERSION GENERATED. JK 09/25/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099886 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 635210

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Aug-27-19 11:35 am
Report Date: 25-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	635210-001		635210-002					
	Field Id:	SW21		SW22					
	Depth:	0-6 ft		0-6 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-26-19 12:58		Aug-26-19 13:12					
BTEX by EPA 8021B	***Extracted:***	Aug-27-19 12:30		Aug-27-19 12:30					
	Analyzed:	Aug-27-19 15:52		Aug-27-19 16:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.000998	0.000998	<0.000994	0.000994				
Toluene		<0.000998	0.000998	<0.000994	0.000994				
Ethylbenzene		<0.000998	0.000998	<0.000994	0.000994				
m,p-Xylenes		<0.00200	0.00200	<0.00199	0.00199				
o-Xylene		<0.000998	0.000998	<0.000994	0.000994				
Total Xylenes		<0.000998	0.000998	<0.000994	0.000994				
Total BTEX		<0.000998	0.000998	<0.000994	0.000994				
Chloride by EPA 300	***Extracted:***	Aug-27-19 13:08		Aug-27-19 13:08					
	Analyzed:	Aug-27-19 16:39		Aug-27-19 16:45					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		637 D	49.8	825 D	50.0				
TPH by SW8015 Mod	***Extracted:***	Aug-27-19 12:30		Aug-27-19 12:30					
	Analyzed:	Aug-27-19 18:01		Aug-27-19 18:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0				
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0				
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0				
Total TPH		<25.0	25.0	<25.0	25.0				
Total GRO-DRO		<25.0	25.0	<25.0	25.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635210

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW21**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635210-001	Date Collected:	08.26.19 12.58	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**637**	49.8	mg/kg	08.28.19 11.04	D	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 18.01	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 18.01	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.27.19 18.01	
o-Terphenyl	84-15-1	93	%	70-135	08.27.19 18.01	

Certificate of Analytical Results 635210

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW21**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635210-001	Date Collected:	08.26.19 12.58	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.27.19 15.52	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.27.19 15.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	80-120	08.27.19 15.52	
4-Bromofluorobenzene	460-00-4	115	%	80-120	08.27.19 15.52	

Certificate of Analytical Results 635210

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW22**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635210-002	Date Collected:	08.26.19 13.12	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 13.08	Basis:	Wet Weight
Seq Number:	3099912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**825**	50.0	mg/kg	08.28.19 11.10	D	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 18.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 18.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 18.22	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 18.22	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.27.19 18.22	
o-Terphenyl	84-15-1	92	%	70-135	08.27.19 18.22	

Certificate of Analytical Results 635210

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**SW22**	Matrix:	Soil	Date Received:	08.27.19 11.35
Lab Sample Id:	635210-002	Date Collected:	08.26.19 13.12	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 12.30	Basis:	Wet Weight
Seq Number:	3099886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.27.19 16.12	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.27.19 16.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	80-120	08.27.19 16.12	
4-Bromofluorobenzene	460-00-4	112	%	80-120	08.27.19 16.12	

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 635210

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685067-1-BLK LCS Sample Id: 7685067-1-BKS LCSD Sample Id: 7685067-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	247	99	247	99	80-120	0	20	mg/kg	08.27.19 15:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.84	200	202	97	205	98	80-120	1	20	mg/kg	08.27.19 15:47	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635261-004 MS Sample Id: 635261-004 S MSD Sample Id: 635261-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	101	200	325	112	325	112	80-120	0	20	mg/kg	08.27.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685096-1-BLK LCS Sample Id: 7685096-1-BKS LCSD Sample Id: 7685096-1-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)	<25.0	1000	1100	110	1130	113	70-135	3	35	mg/kg	08.27.19 11:33	
Diesel Range Organics (DRO)	<9.88	1000	995	100	1020	102	70-135	2	35	mg/kg	08.27.19 11:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		122		121		70-135	%	08.27.19 11:33
o-Terphenyl	95		108		121		70-135	%	08.27.19 11:33

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 635210

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 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)	<25.0	1000	1030	103	1060	106	70-135	3	35	mg/kg	08.27.19 15:38	
Diesel Range Organics (DRO)	<9.88	1000	933	93	958	96	70-135	3	35	mg/kg	08.27.19 15:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		118		70-135	%	08.27.19 15:38
o-Terphenyl	103		109		70-135	%	08.27.19 15:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685106-1-BLK LCS Sample Id: 7685106-1-BKS LCSD Sample Id: 7685106-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0887	89	0.0821	82	70-130	8	35	mg/kg	08.27.19 10:25	
Toluene	<0.00100	0.100	0.0952	95	0.0894	89	70-130	6	35	mg/kg	08.27.19 10:25	
Ethylbenzene	<0.00100	0.100	0.105	105	0.0991	99	71-129	6	35	mg/kg	08.27.19 10:25	
m,p-Xylenes	<0.00100	0.200	0.220	110	0.207	104	70-135	6	35	mg/kg	08.27.19 10:25	
o-Xylene	<0.000500	0.100	0.109	109	0.102	102	71-133	7	35	mg/kg	08.27.19 10:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		105		80-120	%	08.27.19 10:25
4-Bromofluorobenzene	120		119		116		80-120	%	08.27.19 10:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0935	94	0.101	102	70-130	8	35	mg/kg	08.27.19 13:14	
Toluene	<0.000998	0.0998	0.0987	99	0.106	107	70-130	7	35	mg/kg	08.27.19 13:14	
Ethylbenzene	<0.000998	0.0998	0.110	110	0.118	119	71-129	7	35	mg/kg	08.27.19 13:14	
m,p-Xylenes	<0.000998	0.200	0.229	115	0.244	123	70-135	6	35	mg/kg	08.27.19 13:14	
o-Xylene	<0.000998	0.0998	0.114	114	0.122	123	71-133	7	35	mg/kg	08.27.19 13:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		111		80-120	%	08.27.19 13:14
4-Bromofluorobenzene	118		119		80-120	%	08.27.19 13:14

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: 635210

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:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@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 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date: 08/24/19	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.3	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW07 SW21	S	08/26/19	1258	0-4'	1	X	X	X
SW09 SW22	S	08/26/19	1312	0-4'	1	X	X	X

Work Order Notes

TAT starts the day received 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	Fatima Smith		08/27/019 9:40			
2						
3						
4						
5						
6						

Analytical Report 635261

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 421

012919160

28-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
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-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

28-AUG-19

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

Reference: XENCO Report No(s): **635261**
PLU 421
Project Address:

Dan Moir:

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) 635261. 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. 635261 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 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH03	S	08-27-19 10:29	1 ft	635261-001
PH03A	S	08-27-19 10:25	9 ft	635261-002
PH04	S	08-27-19 12:03	3 ft	635261-003
PH04A	S	08-27-19 12:41	9 ft	635261-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099886 BTEX by EPA 8021B

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

Certificate of Analysis Summary 635261

LT Environmental, Inc., Arvada, CO

Project Name: PLU 421

Project Id: 012919160
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Aug-27-19 03:33 pm
Report Date: 28-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635261-001		635261-002		635261-003		635261-004					
	Field Id:	PH03		PH03A		PH04		PH04A					
	Depth:	1- ft		9- ft		3- ft		9- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-27-19 10:29		Aug-27-19 10:25		Aug-27-19 12:03		Aug-27-19 12:41					
BTEX by EPA 8021B	***Extracted:***	Aug-27-19 16:00		Aug-27-19 16:00		Aug-27-19 16:00		Aug-27-19 16:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-27-19 17:12		Aug-27-19 17:32		Aug-27-19 17:51		Aug-27-19 18:11					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
Toluene		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
m,p-Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202				
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Aug-27-19 16:20		Aug-27-19 16:20		Aug-27-19 16:00		Aug-27-19 16:20					
SUB: T104704400-18-16	***Analyzed:***	Aug-27-19 16:51		Aug-27-19 16:56		Aug-27-19 17:02		Aug-27-19 17:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		135	9.96	<9.98	9.98	16.7	9.90	101	9.94				
TPH by SW8015 Mod	***Extracted:***	Aug-27-19 16:30		Aug-27-19 16:30		Aug-27-19 16:30		Aug-27-19 16:30					
	Analyzed:	Aug-27-19 18:42		Aug-27-19 19:02		Aug-27-19 19:43		Aug-27-19 20:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0				
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0				
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0				
Total TPH		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0				
Total GRO-DRO		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-001	Date Collected:	08.27.19 10.29	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 16.20	Basis:	Wet Weight
Seq Number:	3099912			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**135**	9.96	mg/kg	08.27.19 16.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.27.19 18.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.27.19 18.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.27.19 18.42	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.27.19 18.42	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.27.19 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.27.19 18.42	
o-Terphenyl	84-15-1	93	%	70-135	08.27.19 18.42	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-001	Date Collected:	08.27.19 10.29	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.00	Basis:	Wet Weight
Seq Number:	3099886			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.27.19 17.12	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.27.19 17.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	80-120	08.27.19 17.12	
1,4-Difluorobenzene	540-36-3	113	%	80-120	08.27.19 17.12	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-002	Date Collected:	08.27.19 10.25	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 16.20	Basis:	Wet Weight
Seq Number:	3099912			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	08.27.19 16.56	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 19.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 19.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 19.02	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 19.02	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 19.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.27.19 19.02	
o-Terphenyl	84-15-1	94	%	70-135	08.27.19 19.02	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-002	Date Collected:	08.27.19 10.25	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.00	Basis:	Wet Weight
Seq Number:	3099886			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.27.19 17.32	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.27.19 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	80-120	08.27.19 17.32	
1,4-Difluorobenzene	540-36-3	112	%	80-120	08.27.19 17.32	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-003	Date Collected:	08.27.19 12.03	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 16.00	Basis:	Wet Weight
Seq Number:	3099912			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.7**	9.90	mg/kg	08.27.19 17.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 19.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 19.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 19.43	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 19.43	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 19.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	08.27.19 19.43	
o-Terphenyl	84-15-1	97	%	70-135	08.27.19 19.43	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-003	Date Collected:	08.27.19 12.03	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.00	Basis:	Wet Weight
Seq Number:	3099886			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.27.19 17.51	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.27.19 17.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	08.27.19 17.51	
1,4-Difluorobenzene	540-36-3	103	%	80-120	08.27.19 17.51	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-004	Date Collected:	08.27.19 12.41	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.27.19 16.20	Basis:	Wet Weight
Seq Number:	3099912			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	9.94	mg/kg	08.27.19 17.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.30	Basis:	Wet Weight
Seq Number:	3099875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.27.19 20.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.27.19 20.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.27.19 20.03	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.27.19 20.03	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.27.19 20.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.27.19 20.03	
o-Terphenyl	84-15-1	92	%	70-135	08.27.19 20.03	

Certificate of Analytical Results 635261

LT Environmental, Inc., Arvada, CO

PLU 421

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635261-004	Date Collected:	08.27.19 12.41	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.27.19 16.00	Basis:	Wet Weight
Seq Number:	3099886			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.27.19 18.11	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.27.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	08.27.19 18.11	
1,4-Difluorobenzene	540-36-3	106	%	80-120	08.27.19 18.11	

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 635261

LT Environmental, Inc.

PLU 421

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685067-1-BLK LCS Sample Id: 7685067-1-BKS LCSD Sample Id: 7685067-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	247	99	247	99	80-120	0	20	mg/kg	08.27.19 15:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.84	200	202	97	205	98	80-120	1	20	mg/kg	08.27.19 15:47	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099912 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635261-004 MS Sample Id: 635261-004 S MSD Sample Id: 635261-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	101	200	325	112	325	112	80-120	0	20	mg/kg	08.27.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685096-1-BLK LCS Sample Id: 7685096-1-BKS LCSD Sample Id: 7685096-1-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)	<25.0	1000	1100	110	1130	113	70-135	3	35	mg/kg	08.27.19 11:33	
Diesel Range Organics (DRO)	<9.88	1000	995	100	1020	102	70-135	2	35	mg/kg	08.27.19 11:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		122		121		70-135	%	08.27.19 11:33
o-Terphenyl	95		108		121		70-135	%	08.27.19 11:33

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 635261

LT Environmental, Inc.

PLU 421

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099875 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 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)	<25.0	1000	1030	103	1060	106	70-135	3	35	mg/kg	08.27.19 15:38	
Diesel Range Organics (DRO)	<9.88	1000	933	93	958	96	70-135	3	35	mg/kg	08.27.19 15:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		118		70-135	%	08.27.19 15:38
o-Terphenyl	103		109		70-135	%	08.27.19 15:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Solid Date Prep: 08.27.19
MB Sample Id: 7685106-1-BLK LCS Sample Id: 7685106-1-BKS LCSD Sample Id: 7685106-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0887	89	0.0821	82	70-130	8	35	mg/kg	08.27.19 10:25	
Toluene	<0.00100	0.100	0.0952	95	0.0894	89	70-130	6	35	mg/kg	08.27.19 10:25	
Ethylbenzene	<0.00100	0.100	0.105	105	0.0991	99	71-129	6	35	mg/kg	08.27.19 10:25	
m,p-Xylenes	<0.00100	0.200	0.220	110	0.207	104	70-135	6	35	mg/kg	08.27.19 10:25	
o-Xylene	<0.000500	0.100	0.109	109	0.102	102	71-133	7	35	mg/kg	08.27.19 10:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		105		80-120	%	08.27.19 10:25
4-Bromofluorobenzene	120		119		116		80-120	%	08.27.19 10:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099886 Matrix: Soil Date Prep: 08.27.19
Parent Sample Id: 635205-001 MS Sample Id: 635205-001 S MSD Sample Id: 635205-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0935	94	0.101	102	70-130	8	35	mg/kg	08.27.19 13:14	
Toluene	<0.000998	0.0998	0.0987	99	0.106	107	70-130	7	35	mg/kg	08.27.19 13:14	
Ethylbenzene	<0.000998	0.0998	0.110	110	0.118	119	71-129	7	35	mg/kg	08.27.19 13:14	
m,p-Xylenes	<0.000998	0.200	0.229	115	0.244	123	70-135	6	35	mg/kg	08.27.19 13:14	
o-Xylene	<0.000998	0.0998	0.114	114	0.122	123	71-133	7	35	mg/kg	08.27.19 13:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		111		80-120	%	08.27.19 13:14
4-Bromofluorobenzene	118		119		80-120	%	08.27.19 13:14

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: 635201

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Project Manager:	Dan Moir	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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 421	Turn Around	
Project Number:	012919160	Routine ☐	
P.O. Number:	7/20/19 spill date	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date: 08/29/19	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.0	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	avg -0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH03	S	08/27/19	1029	1'	1	X	X	X
PH03A	S	08/27/19	1025	9'	1	X	X	X
PH04	S	08/27/19	1203	3'	1	X	X	X
PH04A	S	08/27/19	1241	9'	1	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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima Smith		8/27/19 15:33	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/27/2019 03:33:00 PM

Work Order #: 635261

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/27/2019

Checklist reviewed by: Jessica Kramer Date: 08/28/2019