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	NAB1908038039
District RP	2 2RP-5314
Facility ID	
Application ID	pAB1908037546

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1908038039
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.092069 Longitude -103.785430

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit #052 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/3/2019	API# *(if applicable)* 30-015-24147

Unit Letter	Section	Township	Range	County
C	33	25S	31E	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)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 97	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Tank corrosion resulted in the release of 97 barrels of condensate into an unlined berm. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1908038039
District RP	2RP-5314
Facility ID	
Application ID	pAB1908037546

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, and Jim Griswold (NMOCD), and Jim Amos (BLM) on 3/3/2019 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:

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 3/15/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by:
Date: 3/21/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5314
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-5314
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: 10/01/2019

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-5314
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: 10/01/2019

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

October 1, 2019

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

RE: Deferral Request Addendum
Poker Lake Unit #052 Battery
Remediation Permit Number 2RP-5314
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to an original Deferral Request dated May 31, 2019. This addendum provides an update of remediation activities at the Poker Lake Unit #052 Battery (Site) located in Unit C, Section 33, Township 25 South, Range 31 East, in Eddy County, New Mexico (Figure 1) in response to a condition of approval of the previous Deferral Request. The condition of approval requiring XTO to extend the floor of the existing excavation did not remove all impacted soil. Based on additional work conducted and new delineation points, XTO is requesting deferral of the remaining impacted soil until major well pad reconstruction or abandonment.

BACKGROUND

On May 31, 2019, LTE submitted a Deferral Request to the New Mexico Oil Conservation Division (NMOCD) for impacted soil from a March 3, 2019 condensate release associated with a corroded condensate storage tank at the Site. The Remediation Permit (RP) Number is 2RP-5314 and XTO excavated the majority of the impacted soil around the tank. LTE personnel collected preliminary, delineation, and excavation soil samples within and around the release extent during March and May 2019, to assess the lateral and vertical extent of impacts to soil. The preliminary, delineation, and excavation soil samples are depicted on Figure 2, Figure 3, and Figure 4, respectively. Deferral was requested due to residual impacted soil left in place around and beneath active processing equipment and pipelines and for compliance with XTO's safety policy regarding earth-moving activities within 2 feet of active process equipment and pipelines.

On June 4, 2019, the NMOCD denied deferral, via email, based on the following reasoning:

> *"Before we can approve a deferral, the spill needs to be vertically delineated. All of the floor samples are over the limit in either chlorides and/or TPH. The OCD*

requests that samples be taken to a depth that contamination amounts are under the limit."

Following additional questions from XTO for clarification on delineation sample locations, NMOCD reviewed the results a second time on June 10, 2019, and approved the deferral with one condition:

"All floor samples be excavated to a depth that contamination amounts are under the limit."

ADDITIONAL SITE ACTIVITIES

During September 2019, LTE completed additional soil removal on the floor of the excavation to address the condition of approval. Depth of the original excavation ranged from 4 feet to 4.5 feet below ground surface (bgs). Further excavation of impacted soil occurred, extending the depth of the excavation to 4.5 feet to 6.5 feet bgs. In order to achieve those depths and not compromise the stability of the storage tank, LTE had to extend the excavation east and south to safely slope the sidewalls.

LTE collected 5-point composite soil samples (FS03A, FS04A, FS06A, FS07A, FS08, FS09/FS09A, FS10, FS11/FS11A, FS12, and SW11 through SW14) from depths ranging from approximately the ground surface to 6.5 feet bgs. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, re-sealable plastic bag and homogenizing the samples by thorough mixing. Samples were then placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8021B, total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.

The final excavation extent measured approximately 2,000 square feet in area. A total of approximately 300 additional cubic yards of impacted soil were removed. The impacted soil was transported and properly disposed of at the R360 landfill facility in Hobbs, New Mexico. The horizontal extent of the final excavation extent and soil sample locations are presented on Figure 5.

LTE conducted additional delineation activities to better characterize impacted soil being left in place. Delineation pothole PH05 (PH05C) was advanced to 10.5 feet bgs to confirm the vertical extent of impacts. The location of PH05 is shown on Figure 5 in conjunction with existing delineation potholes PH03 to 6 feet bgs and PH01 to 10 feet bgs.

SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated excavation soil samples FS03A, FS06A, FS09/FS09A, FS10, and FS11/FS11A exceeded the Closure Criteria for chloride, as did delineation samples PH01, PH03A, and PH05B. Excavation sample FS10 exceeded the Closure Criteria for TPH, as did delineation samples PH01, PH05, and PH05A.

Laboratory analytical results indicated that delineation and excavation soil samples PH01A, PH03C, PH05C, FS04A, FS07A, FS08, FS12, and SW11 through SW14 were compliant with the Closure Criteria for benzene, BTEX, TPH, and chloride. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

DEFERRAL REQUEST

Due to the density and proximity of the active processing equipment and pipelines, excavation was completed to the maximum extent feasible. A total of approximately 300 cubic yards were excavated from the Site; however, residual impacted soil was left in-place around and beneath active processing equipment and pipelines. Full remediation of soil around and beneath the equipment would require major facility and pad deconstruction.

Impacted soil was excavated to the extent feasible and laboratory analytical results for excavation soil samples from the sidewalls along the storage tank and on the portions of the excavation floor nearest the storage tank indicated that soil with TPH and/or chloride concentrations exceeding the Closure Criteria was left in place. Impacted soil near the active truck loadout and loadout line north of the storage tank was also left in place. Continued vertical excavation in these areas was limited by pipelines and production equipment in the space needed laterally to slope the excavation in a manner that wouldn't compromise the integrity of the storage tanks. The active truck loadout and loadout line were present to the north, active pipelines were present to the south and east, and a second storage tank was present to the west. Exterior sidewall samples collected from the final excavation extent and floor samples collected from the southern extent of the excavation are compliant the Closure Criteria.

The impacted soil remaining in place around and beneath the storage tanks is delineated vertically and laterally by delineation soil samples collected from potholes PH01 through PH07. An estimated 40 cubic yards of impacted soil remain in place between 4.5 feet and 10.5 feet bgs, assuming a maximum 10.5 foot depth based on delineation soil samples PH01A, PH03C, and PH05C, collected from depths ranging from 6 feet to 10.5 feet bgs that were compliant with the Closure Criteria.

In addition to the impacts being fully delineated both laterally and vertically, contaminants left in place are all below the root zone in the top 4 feet of the subsurface. Impacted soil left in place

is unlikely to have an effect on surface water or vegetation in this area. In addition, depth to groundwater at the Site is estimated to be greater than 100 feet bgs; therefore, migration of contaminants to groundwater is unlikely.

Based on site conditions, XTO requests to backfill the existing excavation and complete remediation during any future major well pad 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. An updated NMOCD Form C-141 is included as Attachment 1 and a Photographic Log is included as Attachment 3.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

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

cc: Kyle Littrell, XTO
Victoria Venegas, NMOCD
Robert Hamlet, NMOCD
Jim Amos, United States Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Initial Excavation Soil Sample Locations
Figure 5	Final Excavation Soil Sample Locations
Table 1	Laboratory Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5314)
Attachment 2	Soil Analytical Reports
Attachment 3	Photographic Log

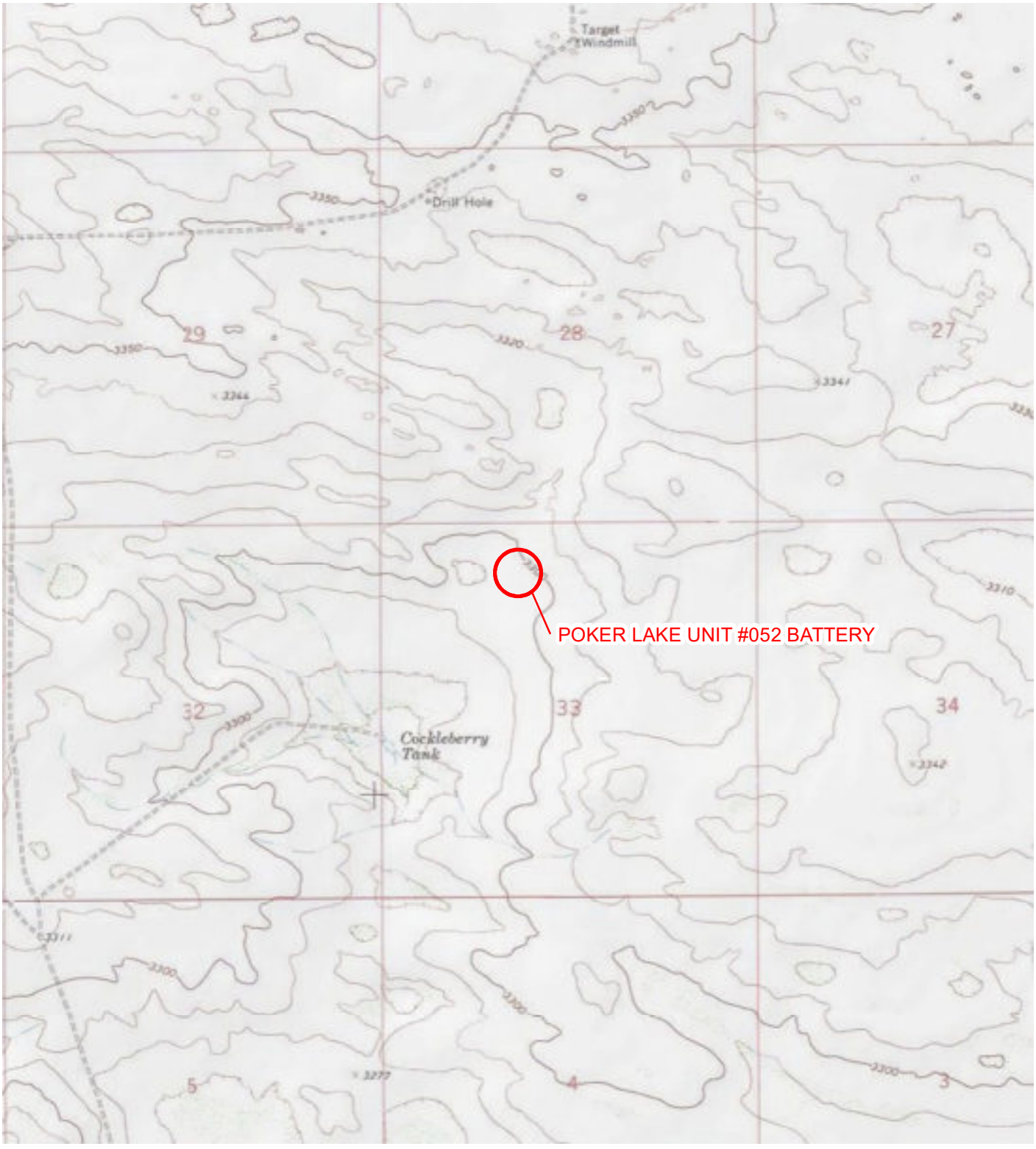

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-5314

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT #052 BATTERY
UNIT C SEC 33 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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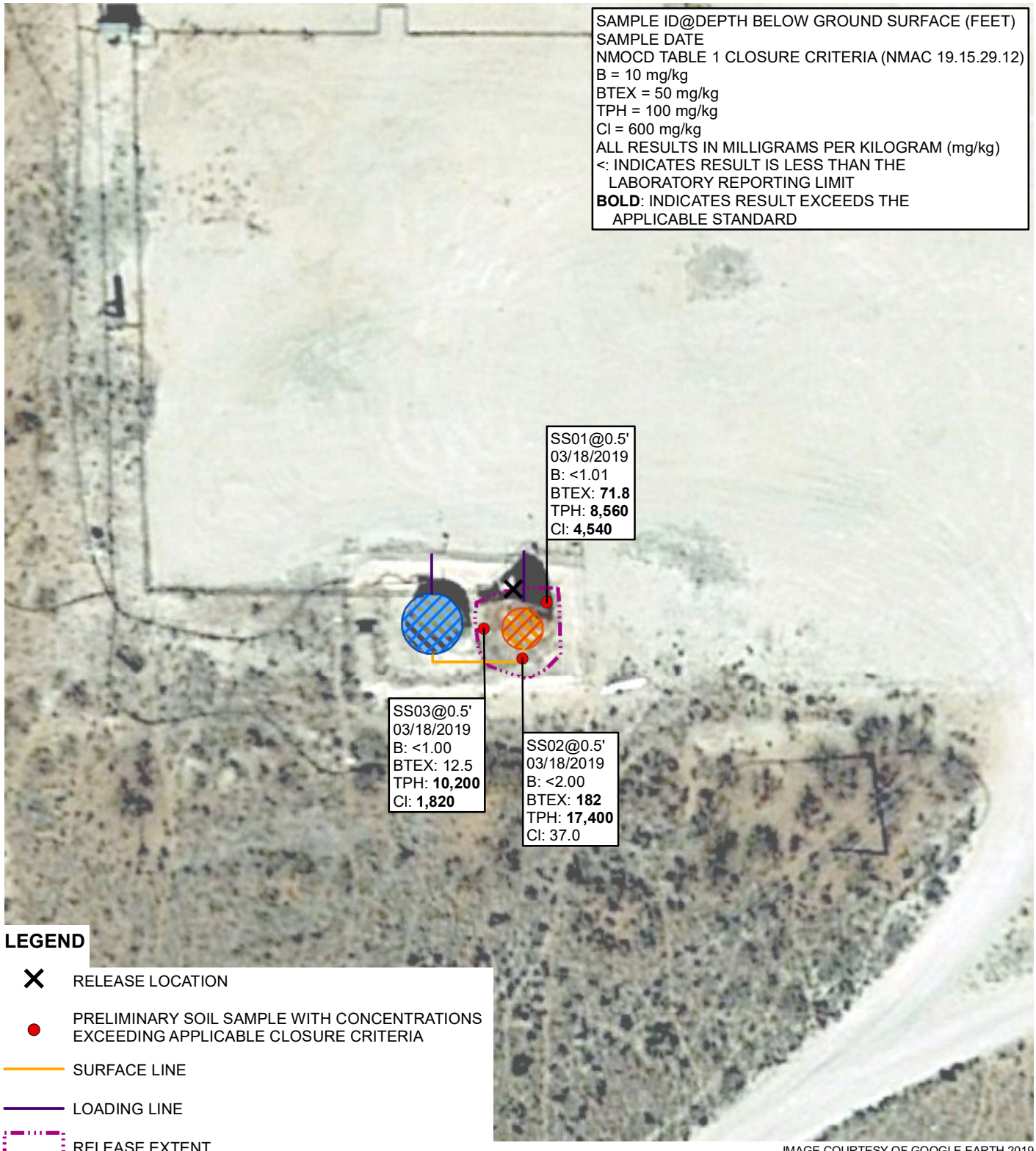


LEGEND

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- SURFACE LINE
- LOADING LINE
- RELEASE EXTENT
- PRODUCED WATER STORAGE TANK
- CONDENSATE STORAGE TANK

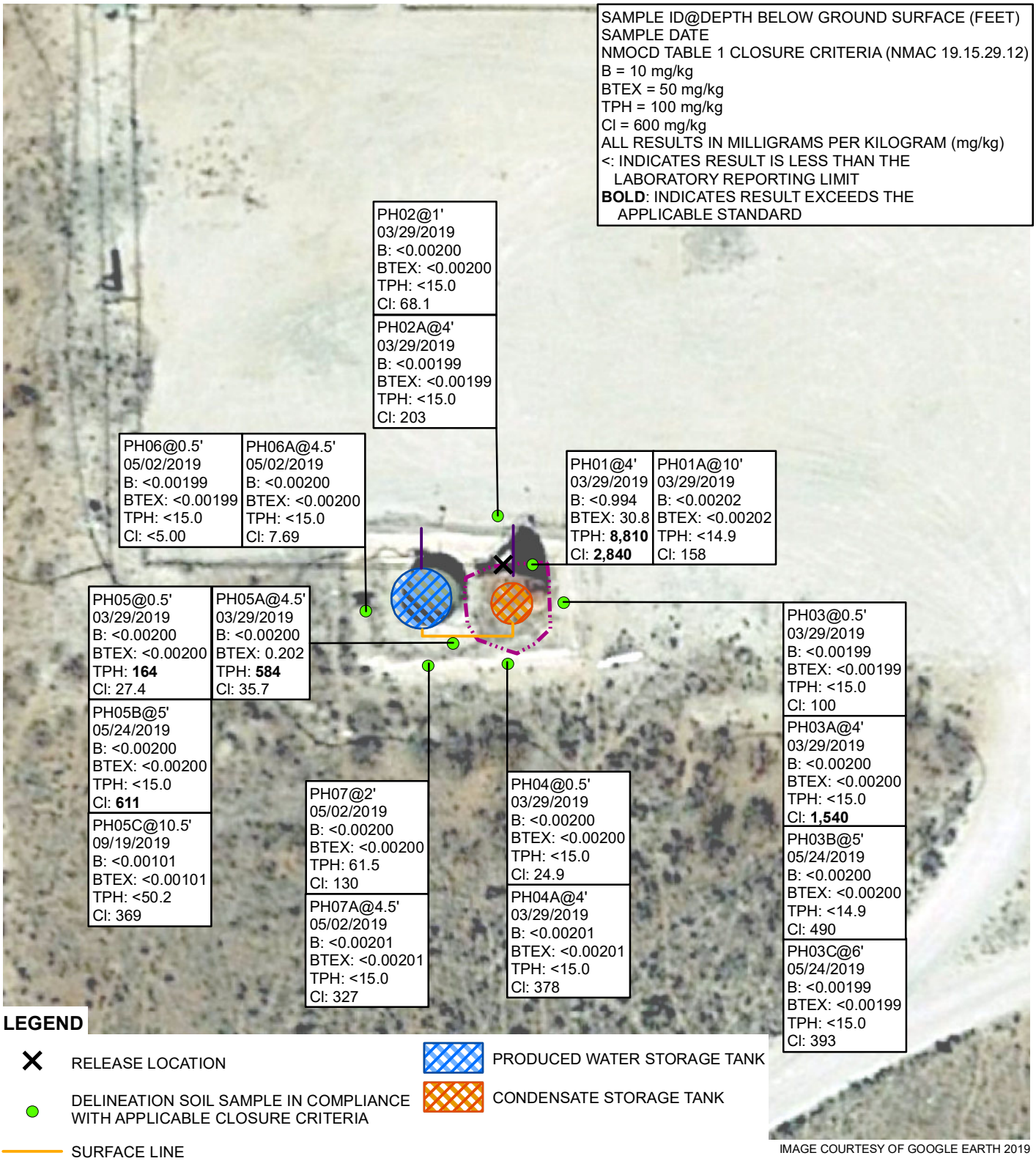
B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl : CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5314

0 40 80
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #052 BATTERY
UNIT C SEC 33 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

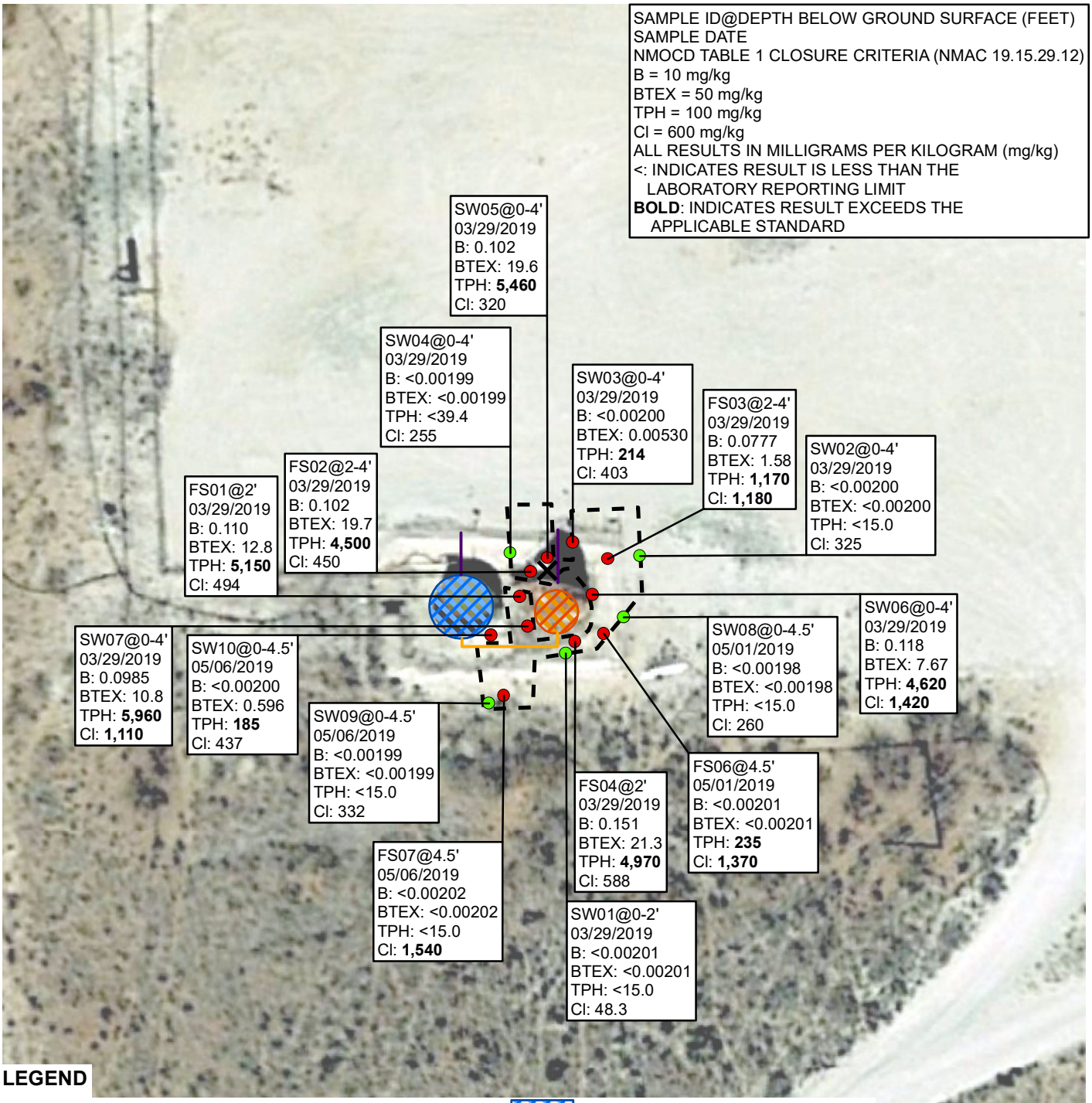
P:\XTO Energy\GIS\MXD\012919042_PLU 052 BATTERY\012919042_FIG02_PRELIMINARY_5314.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl : CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5314

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #052 BATTERY
UNIT C SEC 33 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

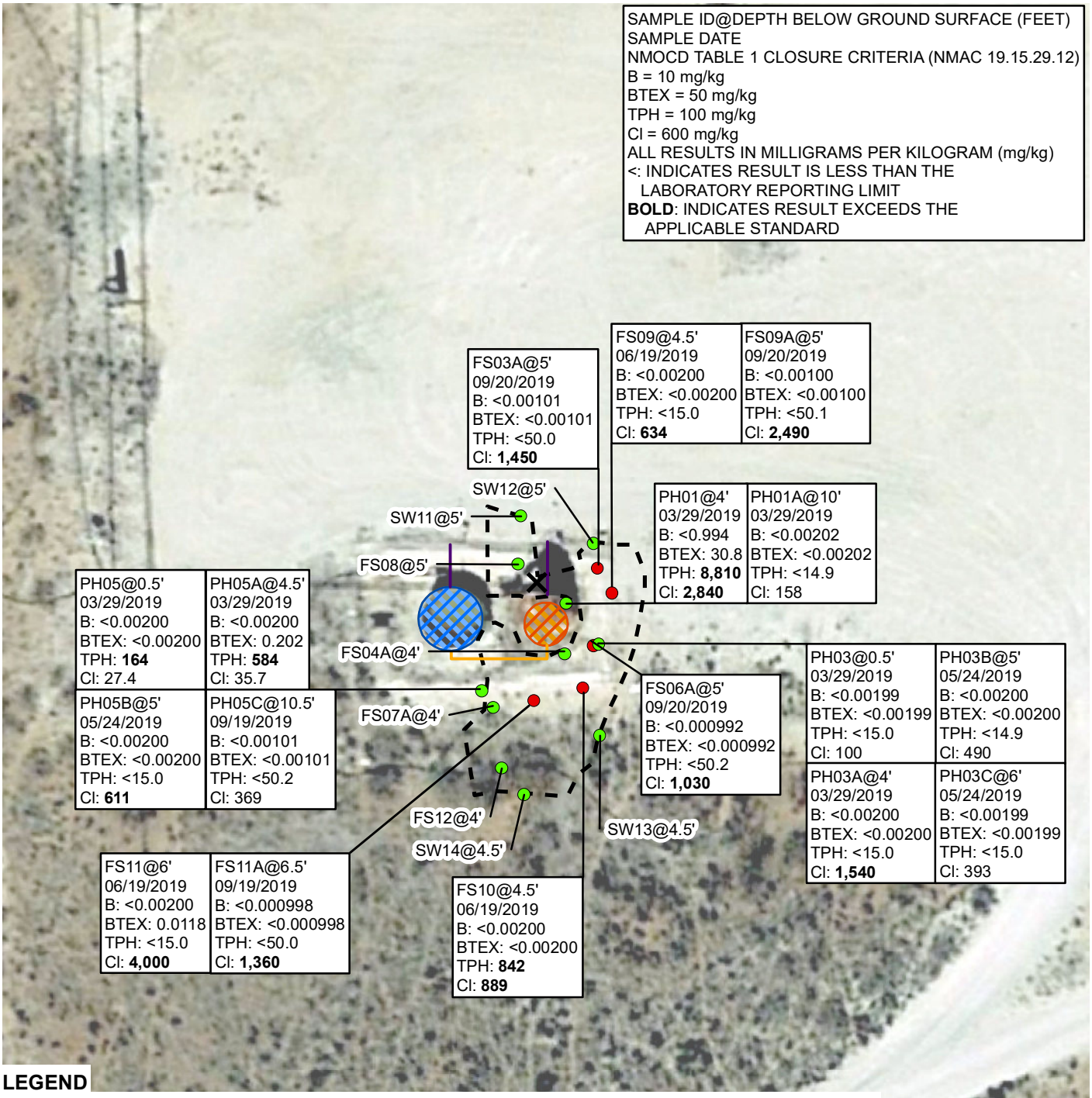
P:\XTO Energy\GIS\MXD\012919042_PLU 052 BATTERY\012919042_FIG03_DELINEATION_5314.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl : CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5314

FIGURE 4
INITIAL EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 052 BATTERY
UNIT C SEC 33 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919042_PLU 052 BATTERY\012919042_FIG04_EXCAVATION_5314.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl : CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5314

FIGURE 5
FINAL EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #052 BATTERY
UNIT C SEC 33 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919042_PLU 052 BATTERY\012919042_FIG05_EXCAVATION_5314_1.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #052 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5314
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)
SS01	0.5	03/18/2019	<1.01	5.64	5.45	60.7	**71.8**	3,670	4,680	213	8,350	**8,560**	**4,540**
SS02	0.5	03/18/2019	<2.00	35.7	9.59	136	**182**	9,340	7,730	342	17,070	**17,400**	37.0
SS03	0.5	03/18/2019	<1.00	<1.00	4.17	8.33	12.5	4,100	5,800	292	9,900	**10,200**	**1,820**
PH01	4	03/29/2019	<0.994	<0.994	5.30	25.5	30.8	3,660	4,960	191	8,620	**8,810**	**2,840**
PH01A	10	03/29/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	158
PH02	1	03/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	68.1
PH02A	4	03/29/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	203
PH03	0.5	03/29/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	100
PH03A	4	03/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**1,540**
PH03B	5	05/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	490
PH03C	6	05/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	393
PH04	0.5	03/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.9
PH04A	4	03/29/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	378
PH05	0.5	03/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	147	16.8	147	**164**	27.4
PH05A	4.5	03/29/2019	<0.00200	<0.00200	0.0132	0.189	0.202	38.8	484	61.5	523	**584**	35.7
PH05B	5	05/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**611**
PH05C	10.5	09/19/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	369
PH06	0.5	05/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH06A	4.5	05/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.69
PH07	2	05/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	61.5	<14.9	61.5	61.5	130
PH07A	4.5	05/02/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	327
FS01	2	03/29/2019	0.110	0.351	1.51	10.9	12.8	1,700	3,300	145	5,000	**5,150**	494
FS02	2-4	03/29/2019	0.102	1.31	2.01	16.3	19.7	1,560	2,810	125	4,370	**4,500**	450
FS03	2-4	03/29/2019	0.0777	<0.0201	0.315	1.19	1.58	271	861	40.0	1,130	**1,170**	**1,180**
FS03A	5	09/20/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	**1,450**

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #052 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5314
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)
FS04	2	03/29/2019	0.151	1.28	2.03	17.8	21.3	1,550	3,270	146	4,820	**4,970**	588
FS04A	4	09/19/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<50.3	<50.3	<50.3	<50.3	<50.3	65.5
FS06	4.5	05/01/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	15.7	219	<15.0	235	**235**	**1,370**
FS06A	5	09/20/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<50.2	<50.2	<50.2	<50.2	<50.2	**1,030**
FS07	4.5	05/06/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	**1,540**
FS07A	4	09/19/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.1	<50.1	<50.1	<50.1	<50.1	300
FS08	5	06/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	20.1	<15.0	20.1	20.1	485
FS09	4.5	06/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**634**
FS09A	5	09/20/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	**2,490**
FS10	4.5	06/19/2019	<0.00200	<0.00200	0.0695	0.0865	0.156	105	719	17.7	824	**842**	**889**
FS11	6	06/19/2019	<0.00200	<0.00200	0.00957	0.00223	0.0118	<15.0	<15.0	<15.0	<15.0	<15.0	**4,000**
FS11A	6.5	09/19/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.0	<50.0	<50.0	<50.0	<50.0	**1,360**
FS12	4	09/19/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.8	<49.8	<49.8	<49.8	<49.8	29.4
SW01	0 - 2	03/29/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	48.3
SW02	0 - 4	03/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	325
SW03	0 - 4	03/29/2019	<0.00200	<0.00200	<0.00200	0.0053	0.00530	24.2	190	<15.0	214	214	403
SW04	0 - 4	03/29/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	39.4	<15.0	39.4	39.4	255
SW05	0 - 4	03/29/2019	0.102	0.778	2.11	16.6	19.6	1,970	3,370	118	5,340	**5,460**	320
SW06	0 - 4	03/29/2019	0.118	0.735	1.09	5.73	7.67	1,440	3,060	117	4,500	**4,620**	**1,420**
SW07	0 - 4	03/29/2019	0.0985	6.04	1.86	2.83	10.8	2,010	3,770	180	5,780	**5,960**	**1,110**
SW08	0 - 4.5	05/01/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	260
SW09	0 - 4.5	05/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	332
SW10	0 - 4.5	05/06/2019	<0.00200	0.0364	0.0205	0.539	0.596	<15.0	153	31.5	153	**185**	437
SW11	0 - 5	06/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	66.7
SW12	0 - 5	06/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	160

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #052 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5314
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)
SW13	0 - 4.5	09/23/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	83.3
SW14	0 - 4.5	09/23/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	22.5
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

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
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
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
TPH - total petroleum hydrocarbons

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	NAB1908038039
District RP	2 2RP-5314
Facility ID	
Application ID	pAB1908037546

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1908038039
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.092069 Longitude -103.785430

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit #052 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/3/2019	API# *(if applicable)* 30-015-24147

Unit Letter	Section	Township	Range	County
C	33	25S	31E	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)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 97	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Tank corrosion resulted in the release of 97 barrels of condensate into an unlined berm. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1908038039
District RP	2RP-5314
Facility ID	
Application ID	pAB1908037546

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, and Jim Griswold (NMOCD), and Jim Amos (BLM) on 3/3/2019 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:

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 3/15/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by:
Date: 3/21/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5314
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-5314
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: 10/01/2019

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-5314
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: 10/01/2019

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: SOIL ANALYTICAL REPORTS

Analytical Report 618269

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 52 Battery

28-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

28-MAR-19

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

Reference: XENCO Report No(s): **618269**
PLU 52 Battery
Project Address: 012919042

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618269. 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. 618269 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-18-19 16:20	0.5 ft	618269-001
SS02	S	03-18-19 16:30	0.5 ft	618269-002
SS03	S	03-18-19 16:40	0.5 ft	618269-003

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083124 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 618269-003,618269-001.

Batch: LBA-3083412 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618269

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id:
Contact: Adrian Baker
Project Location: 012919042

Date Received in Lab: Wed Mar-20-19 01:15 pm
Report Date: 28-MAR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	618269-001		618269-002		618269-003			
	Field Id:	SS01		SS02		SS03			
	Depth:	0.5- ft		0.5- ft		0.5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-18-19 16:20		Mar-18-19 16:30		Mar-18-19 16:40			
BTEX by EPA 8021B	***Extracted:***	Mar-25-19 16:30		Mar-25-19 16:30		Mar-25-19 16:30			
	Analyzed:	Mar-26-19 08:02		Mar-26-19 07:43		Mar-26-19 08:21			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<1.01	1.01	<2.00	2.00	<1.00	1.00		
Toluene		5.64	1.01	35.7	2.00	<1.00	1.00		
Ethylbenzene		5.45	1.01	9.59	2.00	4.17	1.00		
m,p-Xylenes		48.1	2.02	109	4.00	4.32	2.01		
o-Xylene		12.6	1.01	27.3	2.00	4.01	1.00		
Total Xylenes		60.7	1.01	136	2.00	8.33	1.00		
Total BTEX		71.8	1.01	182	2.00	12.5	1.00		
Inorganic Anions by EPA 300	***Extracted:***	Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35			
	Analyzed:	Mar-21-19 15:46		Mar-21-19 16:16		Mar-21-19 16:25			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		4540	50.0	37.0	25.0	1820	25.1		
TPH by SW8015 Mod	***Extracted:***	Mar-23-19 10:00		Mar-23-19 10:00		Mar-23-19 10:00			
	Analyzed:	Mar-24-19 10:13		Mar-24-19 14:08		Mar-24-19 14:28			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		3670	15.0	9340	74.8	4100	74.9		
Diesel Range Organics (DRO)		4680	15.0	7730	74.8	5800	74.9		
Motor Oil Range Hydrocarbons (MRO)		213	15.0	342	74.8	292	74.9		
Total TPH		8560	15.0	17400	74.8	10200	74.9		

Kelsey Brooks
Project Manager

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-001	Date Collected:	03.18.19 16.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4540**	50.0	mg/kg	03.21.19 15.46		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 10.00	Basis:	Wet Weight
Seq Number:	3083124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3670**	15.0	mg/kg	03.24.19 10.13		1
Diesel Range Organics (DRO)	C10C28DRO	**4680**	15.0	mg/kg	03.24.19 10.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**213**	15.0	mg/kg	03.24.19 10.13		1
Total TPH	PHC635	**8560**	15.0	mg/kg	03.24.19 10.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.24.19 10.13	
o-Terphenyl	84-15-1	160	%	70-135	03.24.19 10.13	**

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-001	Date Collected:	03.18.19 16.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<1.01	1.01	mg/kg	03.26.19 08.02	U	500
Toluene	108-88-3	**5.64**	1.01	mg/kg	03.26.19 08.02		500
Ethylbenzene	100-41-4	**5.45**	1.01	mg/kg	03.26.19 08.02		500
m,p-Xylenes	179601-23-1	**48.1**	2.02	mg/kg	03.26.19 08.02		500
o-Xylene	95-47-6	**12.6**	1.01	mg/kg	03.26.19 08.02		500
Total Xylenes	1330-20-7	**60.7**	1.01	mg/kg	03.26.19 08.02		500
Total BTEX		**71.8**	1.01	mg/kg	03.26.19 08.02		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.26.19 08.02	
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.26.19 08.02	

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-002	Date Collected:	03.18.19 16.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.0**	25.0	mg/kg	03.21.19 16.16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 10.00	Basis:	Wet Weight
Seq Number:	3083124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**9340**	74.8	mg/kg	03.24.19 14.08		5
Diesel Range Organics (DRO)	C10C28DRO	**7730**	74.8	mg/kg	03.24.19 14.08		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**342**	74.8	mg/kg	03.24.19 14.08		5
Total TPH	PHC635	**17400**	74.8	mg/kg	03.24.19 14.08		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.24.19 14.08	
o-Terphenyl	84-15-1	88	%	70-135	03.24.19 14.08	

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-002	Date Collected:	03.18.19 16.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<2.00	2.00	mg/kg	03.26.19 07.43	U	1000
Toluene	108-88-3	**35.7**	2.00	mg/kg	03.26.19 07.43		1000
Ethylbenzene	100-41-4	**9.59**	2.00	mg/kg	03.26.19 07.43		1000
m,p-Xylenes	179601-23-1	**109**	4.00	mg/kg	03.26.19 07.43		1000
o-Xylene	95-47-6	**27.3**	2.00	mg/kg	03.26.19 07.43		1000
Total Xylenes	1330-20-7	**136**	2.00	mg/kg	03.26.19 07.43		1000
Total BTEX		**182**	2.00	mg/kg	03.26.19 07.43		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.26.19 07.43	
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.26.19 07.43	

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-003	Date Collected:	03.18.19 16.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1820**	25.1	mg/kg	03.21.19 16.25		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 10.00	Basis:	Wet Weight
Seq Number:	3083124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4100**	74.9	mg/kg	03.24.19 14.28		5
Diesel Range Organics (DRO)	C10C28DRO	**5800**	74.9	mg/kg	03.24.19 14.28		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**292**	74.9	mg/kg	03.24.19 14.28		5
Total TPH	PHC635	**10200**	74.9	mg/kg	03.24.19 14.28		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	03.24.19 14.28	
o-Terphenyl	84-15-1	178	%	70-135	03.24.19 14.28	**

Certificate of Analytical Results 618269

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618269-003	Date Collected:	03.18.19 16.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<1.00	1.00	mg/kg	03.26.19 08.21	U	500
Toluene	108-88-3	<1.00	1.00	mg/kg	03.26.19 08.21	U	500
Ethylbenzene	100-41-4	**4.17**	1.00	mg/kg	03.26.19 08.21		500
m,p-Xylenes	179601-23-1	**4.32**	2.01	mg/kg	03.26.19 08.21		500
o-Xylene	95-47-6	**4.01**	1.00	mg/kg	03.26.19 08.21		500
Total Xylenes	1330-20-7	**8.33**	1.00	mg/kg	03.26.19 08.21		500
Total BTEX		**12.5**	1.00	mg/kg	03.26.19 08.21		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.26.19 08.21	
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.26.19 08.21	

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 618269

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Solid Date Prep: 03.21.19
MB Sample Id: 7673994-1-BLK LCS Sample Id: 7673994-1-BKS LCSD Sample Id: 7673994-1-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	272	109	271	108	90-110	0	20	mg/kg	03.21.19 14:28	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-044 MS Sample Id: 618191-044 S MSD Sample Id: 618191-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.1	249	297	107	292	105	90-110	2	20	mg/kg	03.21.19 14:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-045 MS Sample Id: 618191-045 S MSD Sample Id: 618191-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	250	368	106	366	106	90-110	1	20	mg/kg	03.21.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083124 Matrix: Solid Date Prep: 03.23.19
MB Sample Id: 7674188-1-BLK LCS Sample Id: 7674188-1-BKS LCSD Sample Id: 7674188-1-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	1060	106	1100	110	70-135	4	20	mg/kg	03.24.19 03:00	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1200	120	70-135	4	20	mg/kg	03.24.19 03:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		126		125		70-135	%	03.24.19 03:00
o-Terphenyl	110		119		128		70-135	%	03.24.19 03:00

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 618269

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083124 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618085-001 MS Sample Id: 618085-001 S MSD Sample Id: 618085-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	992	99	1030	103	70-135	4	20	mg/kg	03.24.19 03:59	
Diesel Range Organics (DRO)	<8.10	997	1070	107	1120	112	70-135	5	20	mg/kg	03.24.19 03:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	03.24.19 03:59
o-Terphenyl	113		114		70-135	%	03.24.19 03:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083412 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674330-1-BLK LCS Sample Id: 7674330-1-BKS LCSD Sample Id: 7674330-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.107	107	0.111	111	70-130	4	35	mg/kg	03.26.19 00:11	
Toluene	<0.000454	0.0996	0.103	103	0.107	107	70-130	4	35	mg/kg	03.26.19 00:11	
Ethylbenzene	<0.000563	0.0996	0.110	110	0.113	113	70-130	3	35	mg/kg	03.26.19 00:11	
m,p-Xylenes	<0.00101	0.199	0.213	107	0.219	110	70-130	3	35	mg/kg	03.26.19 00:11	
o-Xylene	<0.000343	0.0996	0.110	110	0.115	115	70-130	4	35	mg/kg	03.26.19 00:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		102		104		70-130	%	03.26.19 00:11
4-Bromofluorobenzene	102		110		120		70-130	%	03.26.19 00:11

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083412 Matrix: Soil Date Prep: 03.25.19
Parent Sample Id: 618793-001 MS Sample Id: 618793-001 S MSD Sample Id: 618793-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.103	104	0.106	106	70-130	3	35	mg/kg	03.26.19 00:49	
Toluene	<0.000453	0.0994	0.0988	99	0.103	103	70-130	4	35	mg/kg	03.26.19 00:49	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.107	107	70-130	3	35	mg/kg	03.26.19 00:49	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.208	103	70-130	3	35	mg/kg	03.26.19 00:49	
o-Xylene	<0.000342	0.0994	0.105	106	0.112	112	70-130	6	35	mg/kg	03.26.19 00:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	03.26.19 00:49
4-Bromofluorobenzene	119		123		70-130	%	03.26.19 00:49

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

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

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

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

Chain of Custody

Work Order No: 6018209

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU 52 Battery	Turn Around	
Project Number:	01291904Z	Routine	☒
P.O. Number:		Rush:	—
Sampler's Name:	L. Lumbach	Due Date:	03/27/2019

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.1/2.0	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Work Order Notes / Sample Comments
SS01	S	03/18/2019	16:20	0.5'	1	X	X	X	32.091736, -103.785557
SS02	S	03/18/2019	16:30	0.5'	1	X	X	X	32.091687, -103.785579
SS03	S	03/18/2019	16:40	0.5'	1	X	X	X	32.091713, -103.785617

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			03/19/2019 10:00	2		3.19.19 / 12:58pm
3			3/20/19 1315	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 4521 7224

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/20/2019 01:15:00 PM

Work Order #: 618269

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/20/2019

Checklist reviewed by: Mike Kimmel Date: 03/20/2019

Analytical Report 619861

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 52 Battery

012919042

10-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

10-APR-19

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

Reference: XENCO Report No(s): **619861**
PLU 52 Battery
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 619861. 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. 619861 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	03-29-19 17:00	2 ft	619861-001
FS02	S	03-29-19 17:02	2 - 4 ft	619861-002
FS04	S	03-29-19 17:10	2 ft	619861-003
FS03	S	03-29-19 17:05	2 - 4 ft	619861-004
SW01	S	03-29-19 16:05	0 - 2 ft	619861-005
SW02	S	03-29-19 16:30	0 - 4 ft	619861-006
SW03	S	03-29-19 16:35	0 - 4 ft	619861-007
SW04	S	03-29-19 16:40	0 - 4 ft	619861-008
SW05	S	03-29-19 16:45	0 - 4 ft	619861-009
SW06	S	03-29-19 16:50	0 - 4 ft	619861-010
SW07	S	03-29-19 16:55	0 - 2 ft	619861-011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3084905 TPH by SW8015 Mod

Lab Sample ID 619861-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Gasoline Range Hydrocarbons (GRO) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 619861-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.

The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3085114 Inorganic Anions by EPA 300

Lab Sample ID 619861-005 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: 619861-004, -005, -006, -007, -008, -009, -010, -011.

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

Batch: LBA-3085188 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 619861-002,619861-009,619861-004,619861-011,619861-010.

Lab Sample ID 619861-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 619861-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011.

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

Certificate of Analysis Summary 619861

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919042
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-03-19 11:25 am
Report Date: 10-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	619861-001		619861-002		619861-003		619861-004		619861-005		619861-006	
	Field Id:	FS01		FS02		FS04		FS03		SW01		SW02	
	Depth:	2- ft		2-4 ft		2- ft		2-4 ft		0-2 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-19 17:00		Mar-29-19 17:02		Mar-29-19 17:10		Mar-29-19 17:05		Mar-29-19 16:05		Mar-29-19 16:30	
BTEX by EPA 8021B	***Extracted:***	Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00	
	Analyzed:	Apr-10-19 08:45		Apr-10-19 09:06		Apr-10-19 09:25		Apr-10-19 22:41		Apr-10-19 03:43		Apr-10-19 04:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.110	0.0994	0.102	0.0992	0.151	0.100	0.0777	0.0201	<0.00201	0.00201	<0.00200	0.00200
Toluene		0.351	0.0994	1.31	0.0992	1.28	0.100	<0.0201	0.0201	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		1.51	0.0994	2.01	0.0992	2.03	0.100	0.315	0.0201	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		7.73	0.199	13.0	0.198	14.1	0.200	0.849	0.0402	<0.00402	0.00402	<0.00400	0.00400
o-Xylene		3.12	0.0994	3.25	0.0992	3.71	0.100	0.340	0.0201	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		10.9	0.0994	16.3	0.0992	17.8	0.100	1.19	0.0201	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		12.8	0.0994	19.7	0.0992	21.3	0.100	1.58	0.0201	<0.00201	0.00201	<0.00200	0.00200
Inorganic Anions by EPA 300 **SUB: T104704215-19-29**	***Extracted:***	Apr-05-19 17:00		Apr-05-19 17:00		Apr-05-19 17:00		Apr-09-19 14:14		Apr-09-19 14:14		Apr-09-19 14:14	
	Analyzed:	Apr-06-19 11:19		Apr-06-19 11:25		Apr-06-19 11:32		Apr-09-19 20:18		Apr-09-19 21:02		Apr-09-19 21:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		494	5.04	450	25.0	588	25.1	1180	10.0	48.3	10.0	325	10.0
TPH by SW8015 Mod	***Extracted:***	Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00	
	Analyzed:	Apr-05-19 19:29		Apr-05-19 20:33		Apr-05-19 20:55		Apr-05-19 21:16		Apr-05-19 21:37		Apr-05-19 21:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		1700	15.0	1560	15.0	1550	15.0	271	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		3300	15.0	2810	15.0	3270	15.0	861	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		145	15.0	125	15.0	146	15.0	40.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		5150	15.0	4500	15.0	4970	15.0	1170	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		5000	15.0	4370	15.0	4820	15.0	1130	15.0	<15.0	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 619861

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919042
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-03-19 11:25 am
Report Date: 10-APR-19
Project Manager: Kalei Stout

Analysis Requested											
	Lab Id:	619861-007		619861-008		619861-009		619861-010		619861-011	
	Field Id:	SW03		SW04		SW05		SW06		SW07	
	Depth:	0-4 ft		0-4 ft		0-4 ft		0-4 ft		0-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-19 16:35		Mar-29-19 16:40		Mar-29-19 16:45		Mar-29-19 16:50		Mar-29-19 16:55	
BTEX by EPA 8021B	***Extracted:***	Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00	
	Analyzed:	Apr-10-19 04:21		Apr-10-19 04:40		Apr-10-19 09:44		Apr-10-19 22:03		Apr-10-19 22:22	
	Units/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	0.102	0.101	0.118	0.0503	0.0985	0.0495
Toluene		<0.00200	0.00200	<0.00199	0.00199	0.778	0.101	0.735	0.0503	6.04	0.0495
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	2.11	0.101	1.09	0.0503	1.86	0.0495
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	12.9	0.202	4.00	0.101	0.551	0.0990
o-Xylene		0.00530	0.00200	<0.00199	0.00199	3.71	0.101	1.73	0.0503	2.28	0.0495
Total Xylenes		0.00530	0.00200	<0.00199	0.00199	16.6	0.101	5.73	0.0503	2.83	0.0495
Total BTEX		0.00530	0.00200	<0.00199	0.00199	19.6	0.101	7.67	0.0503	10.8	0.0495
Inorganic Anions by EPA 300 SUB: T104704215-19-29	***Extracted:***	Apr-09-19 14:14		Apr-09-19 14:14		Apr-09-19 14:14		Apr-09-19 14:14		Apr-09-19 14:14	
	Analyzed:	Apr-09-19 21:38		Apr-09-19 21:46		Apr-09-19 21:55		Apr-09-19 22:04		Apr-09-19 22:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		403	9.94	255	9.92	320	10.0	1420	10.0	1110	10.0
TPH by SW8015 Mod	***Extracted:***	Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 17:00	
	Analyzed:	Apr-05-19 22:19		Apr-05-19 22:40		Apr-05-19 23:01		Apr-05-19 23:22		Apr-06-19 13:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		24.2	15.0	<15.0	15.0	1970	14.9	1440	15.0	2010	15.0
Diesel Range Organics (DRO)		190	15.0	39.4	15.0	3370	14.9	3060	15.0	3770	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	118	14.9	117	15.0	180	15.0
Total TPH		214	15.0	39.4	15.0	5460	14.9	4620	15.0	5960	15.0
Total GRO-DRO		214	15.0	39.4	15.0	5340	14.9	4500	15.0	5780	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-001	Date Collected:	03.29.19 17.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	SPC	Date Prep:	04.05.19 17.00	Basis:	Wet Weight
Seq Number:	3084875			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**494**	5.04	mg/kg	04.06.19 11.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1700**	15.0	mg/kg	04.05.19 19.29		1
Diesel Range Organics (DRO)	C10C28DRO	**3300**	15.0	mg/kg	04.05.19 19.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**145**	15.0	mg/kg	04.05.19 19.29		1
Total TPH	PHC635	**5150**	15.0	mg/kg	04.05.19 19.29		1
Total GRO-DRO	PHC628	**5000**	15.0	mg/kg	04.05.19 19.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	04.05.19 19.29	
o-Terphenyl	84-15-1	130	%	70-135	04.05.19 19.29	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-001	Date Collected:	03.29.19 17.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.110**	0.0994	mg/kg	04.10.19 08.45		50
Toluene	108-88-3	**0.351**	0.0994	mg/kg	04.10.19 08.45		50
Ethylbenzene	100-41-4	**1.51**	0.0994	mg/kg	04.10.19 08.45		50
m,p-Xylenes	179601-23-1	**7.73**	0.199	mg/kg	04.10.19 08.45		50
o-Xylene	95-47-6	**3.12**	0.0994	mg/kg	04.10.19 08.45		50
Total Xylenes	1330-20-7	**10.9**	0.0994	mg/kg	04.10.19 08.45		50
Total BTEX		**12.8**	0.0994	mg/kg	04.10.19 08.45		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	04.10.19 08.45	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 08.45	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-002	Date Collected:	03.29.19 17.02	Sample Depth:	2 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	SPC	Date Prep:	04.05.19 17.00	Basis:	Wet Weight
Seq Number:	3084875			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**450**	25.0	mg/kg	04.06.19 11.25		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1560**	15.0	mg/kg	04.05.19 20.33		1
Diesel Range Organics (DRO)	C10C28DRO	**2810**	15.0	mg/kg	04.05.19 20.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**125**	15.0	mg/kg	04.05.19 20.33		1
Total TPH	PHC635	**4500**	15.0	mg/kg	04.05.19 20.33		1
Total GRO-DRO	PHC628	**4370**	15.0	mg/kg	04.05.19 20.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.05.19 20.33	
o-Terphenyl	84-15-1	120	%	70-135	04.05.19 20.33	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-002	Date Collected:	03.29.19 17.02	Sample Depth:	2 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.102**	0.0992	mg/kg	04.10.19 09.06		50
Toluene	108-88-3	**1.31**	0.0992	mg/kg	04.10.19 09.06		50
Ethylbenzene	100-41-4	**2.01**	0.0992	mg/kg	04.10.19 09.06		50
m,p-Xylenes	179601-23-1	**13.0**	0.198	mg/kg	04.10.19 09.06		50
o-Xylene	95-47-6	**3.25**	0.0992	mg/kg	04.10.19 09.06		50
Total Xylenes	1330-20-7	**16.3**	0.0992	mg/kg	04.10.19 09.06		50
Total BTEX		**19.7**	0.0992	mg/kg	04.10.19 09.06		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	138	%	70-130	04.10.19 09.06	**
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.10.19 09.06	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-003	Date Collected:	03.29.19 17.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	SPC	Date Prep:	04.05.19 17.00	Basis:	Wet Weight
Seq Number:	3084875			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**588**	25.1	mg/kg	04.06.19 11.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1550**	15.0	mg/kg	04.05.19 20.55		1
Diesel Range Organics (DRO)	C10C28DRO	**3270**	15.0	mg/kg	04.05.19 20.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**146**	15.0	mg/kg	04.05.19 20.55		1
Total TPH	PHC635	**4970**	15.0	mg/kg	04.05.19 20.55		1
Total GRO-DRO	PHC628	**4820**	15.0	mg/kg	04.05.19 20.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	04.05.19 20.55	
o-Terphenyl	84-15-1	129	%	70-135	04.05.19 20.55	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-003	Date Collected:	03.29.19 17.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.151**	0.100	mg/kg	04.10.19 09.25		50
Toluene	108-88-3	**1.28**	0.100	mg/kg	04.10.19 09.25		50
Ethylbenzene	100-41-4	**2.03**	0.100	mg/kg	04.10.19 09.25		50
m,p-Xylenes	179601-23-1	**14.1**	0.200	mg/kg	04.10.19 09.25		50
o-Xylene	95-47-6	**3.71**	0.100	mg/kg	04.10.19 09.25		50
Total Xylenes	1330-20-7	**17.8**	0.100	mg/kg	04.10.19 09.25		50
Total BTEX		**21.3**	0.100	mg/kg	04.10.19 09.25		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.10.19 09.25	
4-Bromofluorobenzene	460-00-4	130	%	70-130	04.10.19 09.25	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-004	Date Collected:	03.29.19 17.05	Sample Depth:	2 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1180**	10.0	mg/kg	04.09.19 20.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**271**	15.0	mg/kg	04.05.19 21.16		1
Diesel Range Organics (DRO)	C10C28DRO	**861**	15.0	mg/kg	04.05.19 21.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**40.0**	15.0	mg/kg	04.05.19 21.16		1
Total TPH	PHC635	**1170**	15.0	mg/kg	04.05.19 21.16		1
Total GRO-DRO	PHC628	**1130**	15.0	mg/kg	04.05.19 21.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	04.05.19 21.16	
o-Terphenyl	84-15-1	96	%	70-135	04.05.19 21.16	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-004	Date Collected:	03.29.19 17.05	Sample Depth:	2 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0777**	0.0201	mg/kg	04.10.19 22.41		10
Toluene	108-88-3	<0.0201	0.0201	mg/kg	04.10.19 22.41	U	10
Ethylbenzene	100-41-4	**0.315**	0.0201	mg/kg	04.10.19 22.41		10
m,p-Xylenes	179601-23-1	**0.849**	0.0402	mg/kg	04.10.19 22.41		10
o-Xylene	95-47-6	**0.340**	0.0201	mg/kg	04.10.19 22.41		10
Total Xylenes	1330-20-7	**1.19**	0.0201	mg/kg	04.10.19 22.41		10
Total BTEX		**1.58**	0.0201	mg/kg	04.10.19 22.41		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	163	%	70-130	04.10.19 22.41	**
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.10.19 22.41	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-005	Date Collected:	03.29.19 16.05	Sample Depth:	0 - 2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**48.3**	10.0	mg/kg	04.09.19 21.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.05.19 21.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.05.19 21.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.05.19 21.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.05.19 21.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.05.19 21.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.05.19 21.37	
o-Terphenyl	84-15-1	85	%	70-135	04.05.19 21.37	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-005	Date Collected:	03.29.19 16.05	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 03.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 03.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.10.19 03.43	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.10.19 03.43	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-006	Date Collected:	03.29.19 16.30	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**325**	10.0	mg/kg	04.09.19 21.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.05.19 21.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.05.19 21.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.05.19 21.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.05.19 21.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.05.19 21.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.05.19 21.58	
o-Terphenyl	84-15-1	83	%	70-135	04.05.19 21.58	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-006	Date Collected:	03.29.19 16.30	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 04.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 04.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	04.10.19 04.02	
1,4-Difluorobenzene	540-36-3	84	%	70-130	04.10.19 04.02	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-007	Date Collected:	03.29.19 16.35	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**403**	9.94	mg/kg	04.09.19 21.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**24.2**	15.0	mg/kg	04.05.19 22.19		1
Diesel Range Organics (DRO)	C10C28DRO	**190**	15.0	mg/kg	04.05.19 22.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.05.19 22.19	U	1
Total TPH	PHC635	**214**	15.0	mg/kg	04.05.19 22.19		1
Total GRO-DRO	PHC628	**214**	15.0	mg/kg	04.05.19 22.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.05.19 22.19	
o-Terphenyl	84-15-1	84	%	70-135	04.05.19 22.19	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-007	Date Collected:	03.29.19 16.35	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 04.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 04.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 04.21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 04.21	U	1
o-Xylene	95-47-6	**0.00530**	0.00200	mg/kg	04.10.19 04.21		1
Total Xylenes	1330-20-7	**0.00530**	0.00200	mg/kg	04.10.19 04.21		1
Total BTEX		**0.00530**	0.00200	mg/kg	04.10.19 04.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.10.19 04.21	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.10.19 04.21	

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-008	Date Collected:	03.29.19 16.40	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**255**	9.92	mg/kg	04.09.19 21.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.05.19 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**39.4**	15.0	mg/kg	04.05.19 22.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.05.19 22.40	U	1
Total TPH	PHC635	**39.4**	15.0	mg/kg	04.05.19 22.40		1
Total GRO-DRO	PHC628	**39.4**	15.0	mg/kg	04.05.19 22.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	04.05.19 22.40	
o-Terphenyl	84-15-1	82	%	70-135	04.05.19 22.40	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-008	Date Collected:	03.29.19 16.40	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 04.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 04.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.10.19 04.40	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 04.40	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-009	Date Collected:	03.29.19 16.45	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**320**	10.0	mg/kg	04.09.19 21.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1970**	14.9	mg/kg	04.05.19 23.01		1
Diesel Range Organics (DRO)	C10C28DRO	**3370**	14.9	mg/kg	04.05.19 23.01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**118**	14.9	mg/kg	04.05.19 23.01		1
Total TPH	PHC635	**5460**	14.9	mg/kg	04.05.19 23.01		1
Total GRO-DRO	PHC628	**5340**	14.9	mg/kg	04.05.19 23.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	04.05.19 23.01	
o-Terphenyl	84-15-1	123	%	70-135	04.05.19 23.01	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-009	Date Collected:	03.29.19 16.45	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.102**	0.101	mg/kg	04.10.19 09.44		50
Toluene	108-88-3	**0.778**	0.101	mg/kg	04.10.19 09.44		50
Ethylbenzene	100-41-4	**2.11**	0.101	mg/kg	04.10.19 09.44		50
m,p-Xylenes	179601-23-1	**12.9**	0.202	mg/kg	04.10.19 09.44		50
o-Xylene	95-47-6	**3.71**	0.101	mg/kg	04.10.19 09.44		50
Total Xylenes	1330-20-7	**16.6**	0.101	mg/kg	04.10.19 09.44		50
Total BTEX		**19.6**	0.101	mg/kg	04.10.19 09.44		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	141	%	70-130	04.10.19 09.44	**
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.10.19 09.44	

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-010	Date Collected:	03.29.19 16.50	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1420**	10.0	mg/kg	04.09.19 22.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1440**	15.0	mg/kg	04.05.19 23.22		1
Diesel Range Organics (DRO)	C10C28DRO	**3060**	15.0	mg/kg	04.05.19 23.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**117**	15.0	mg/kg	04.05.19 23.22		1
Total TPH	PHC635	**4620**	15.0	mg/kg	04.05.19 23.22		1
Total GRO-DRO	PHC628	**4500**	15.0	mg/kg	04.05.19 23.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	04.05.19 23.22	
o-Terphenyl	84-15-1	129	%	70-135	04.05.19 23.22	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-010	Date Collected:	03.29.19 16.50	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.118**	0.0503	mg/kg	04.10.19 22.03		25
Toluene	108-88-3	**0.735**	0.0503	mg/kg	04.10.19 22.03		25
Ethylbenzene	100-41-4	**1.09**	0.0503	mg/kg	04.10.19 22.03		25
m,p-Xylenes	179601-23-1	**4.00**	0.101	mg/kg	04.10.19 22.03		25
o-Xylene	95-47-6	**1.73**	0.0503	mg/kg	04.10.19 22.03		25
Total Xylenes	1330-20-7	**5.73**	0.0503	mg/kg	04.10.19 22.03		25
Total BTEX		**7.67**	0.0503	mg/kg	04.10.19 22.03		25

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	152	%	70-130	04.10.19 22.03	**
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 22.03	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-011	Date Collected:	03.29.19 16.55	Sample Depth:	0 - 2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	04.09.19 14.14	Basis:	Wet Weight
Seq Number:	3085114			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1110**	10.0	mg/kg	04.09.19 22.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 17.00	Basis:	Wet Weight
Seq Number:	3084906				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2010**	15.0	mg/kg	04.06.19 13.04		1
Diesel Range Organics (DRO)	C10C28DRO	**3770**	15.0	mg/kg	04.06.19 13.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**180**	15.0	mg/kg	04.06.19 13.04		1
Total TPH	PHC635	**5960**	15.0	mg/kg	04.06.19 13.04		1
Total GRO-DRO	PHC628	**5780**	15.0	mg/kg	04.06.19 13.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	04.06.19 13.04	
o-Terphenyl	84-15-1	114	%	70-135	04.06.19 13.04	

Certificate of Analytical Results 619861

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.03.19 11.25
Lab Sample Id:	619861-011	Date Collected:	03.29.19 16.55	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0985**	0.0495	mg/kg	04.10.19 22.22		25
Toluene	108-88-3	**6.04**	0.0495	mg/kg	04.10.19 22.22		25
Ethylbenzene	100-41-4	**1.86**	0.0495	mg/kg	04.10.19 22.22		25
m,p-Xylenes	179601-23-1	**0.551**	0.0990	mg/kg	04.10.19 22.22		25
o-Xylene	95-47-6	**2.28**	0.0495	mg/kg	04.10.19 22.22		25
Total Xylenes	1330-20-7	**2.83**	0.0495	mg/kg	04.10.19 22.22		25
Total BTEX		**10.8**	0.0495	mg/kg	04.10.19 22.22		25

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.10.19 22.22	
4-Bromofluorobenzene	460-00-4	220	%	70-130	04.10.19 22.22	**

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 619861

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3084875 Matrix: Solid Date Prep: 04.05.19
MB Sample Id: 7675246-1-BLK LCS Sample Id: 7675246-1-BKS LCSD Sample Id: 7675246-1-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	250	100	240	96	90-110	4	20	mg/kg	04.06.19 08:15	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085114 Matrix: Solid Date Prep: 04.09.19
MB Sample Id: 7675351-1-BLK LCS Sample Id: 7675351-1-BKS LCSD Sample Id: 7675351-1-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	100	102	102	104	104	80-120	2	20	mg/kg	04.09.19 17:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3084875 Matrix: Soil Date Prep: 04.05.19
Parent Sample Id: 620188-041 MS Sample Id: 620188-041 S MSD Sample Id: 620188-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.0	248	214	75	285	104	90-110	28	20	mg/kg	04.06.19 08:35	XF

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3084875 Matrix: Soil Date Prep: 04.05.19
Parent Sample Id: 620216-003 MS Sample Id: 620216-003 S MSD Sample Id: 620216-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.7	252	203	72	266	97	90-110	27	20	mg/kg	04.06.19 10:11	XF

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085114 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 619861-004 MS Sample Id: 619861-004 S MSD Sample Id: 619861-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1180	100	1260	80	1260	80	80-120	0	20	mg/kg	04.09.19 20:27	

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 619861

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085114 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 619861-005 MS Sample Id: 619861-005 S MSD Sample Id: 619861-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.3	100	150	102	149	101	80-120	1	20	mg/kg	04.09.19 21:11	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084905 Matrix: Solid Date Prep: 04.05.19
MB Sample Id: 7675252-1-BLK LCS Sample Id: 7675252-1-BKS LCSD Sample Id: 7675252-1-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	988	99	70-135	6	20	mg/kg	04.05.19 18:46	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	964	96	70-135	10	20	mg/kg	04.05.19 18:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		128		114		70-135	%	04.05.19 18:46
o-Terphenyl	104		110		109		70-135	%	04.05.19 18:46

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084906 Matrix: Solid Date Prep: 04.05.19
MB Sample Id: 7675253-1-BLK LCS Sample Id: 7675253-1-BKS LCSD Sample Id: 7675253-1-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	933	93	987	99	70-135	6	20	mg/kg	04.06.19 04:33	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1070	107	70-135	6	20	mg/kg	04.06.19 04:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		119		124		70-135	%	04.06.19 04:33
o-Terphenyl	94		116		122		70-135	%	04.06.19 04:33

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084905 Matrix: Soil Date Prep: 04.05.19
Parent Sample Id: 619861-001 MS Sample Id: 619861-001 S MSD Sample Id: 619861-001 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)	1700	998	2380	68	2390	69	70-135	0	20	mg/kg	04.05.19 19:51	X
Diesel Range Organics (DRO)	3300	998	4240	94	4270	97	70-135	1	20	mg/kg	04.05.19 19:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		127		70-135	%	04.05.19 19:51
o-Terphenyl	127		128		70-135	%	04.05.19 19:51

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 619861

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084906 Matrix: Soil Date Prep: 04.05.19
Parent Sample Id: 619598-001 MS Sample Id: 619598-001 S MSD Sample Id: 619598-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	919	92	916	92	70-135	0	20	mg/kg	04.06.19 05:34	
Diesel Range Organics (DRO)	8.12	998	992	99	1010	101	70-135	2	20	mg/kg	04.06.19 05:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		116		70-135	%	04.06.19 05:34
o-Terphenyl	112		108		70-135	%	04.06.19 05:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085188 Matrix: Solid Date Prep: 04.09.19
MB Sample Id: 7675465-1-BLK LCS Sample Id: 7675465-1-BKS LCSD Sample Id: 7675465-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0959	96	0.0962	97	70-130	0	35	mg/kg	04.10.19 01:50	
Toluene	<0.000455	0.0998	0.0970	97	0.0967	97	70-130	0	35	mg/kg	04.10.19 01:50	
Ethylbenzene	<0.000564	0.0998	0.0900	90	0.0894	90	70-130	1	35	mg/kg	04.10.19 01:50	
m,p-Xylenes	<0.00101	0.200	0.178	89	0.178	89	70-130	0	35	mg/kg	04.10.19 01:50	
o-Xylene	<0.000344	0.0998	0.0901	90	0.0919	92	70-130	2	35	mg/kg	04.10.19 01:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		98		100		70-130	%	04.10.19 01:50
4-Bromofluorobenzene	89		91		99		70-130	%	04.10.19 01:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085188 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 619861-005 MS Sample Id: 619861-005 S MSD Sample Id: 619861-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000493	0.101	0.0857	84	0.0786	79	70-130	9	35	mg/kg	04.10.19 02:29	
Toluene	<0.000459	0.101	0.0515	51	0.0428	43	70-130	18	35	mg/kg	04.10.19 02:29	X
Ethylbenzene	<0.000569	0.101	0.0339	34	0.0270	27	70-130	23	35	mg/kg	04.10.19 02:29	X
m,p-Xylenes	<0.00102	0.202	0.104	51	0.0927	47	70-130	11	35	mg/kg	04.10.19 02:29	X
o-Xylene	0.000372	0.101	0.0822	81	0.0789	79	70-130	4	35	mg/kg	04.10.19 02:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	04.10.19 02:29
4-Bromofluorobenzene	103		100		70-130	%	04.10.19 02:29

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

Chain of Custody

Work Order No: 1619661

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 2

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

Work Order Comments

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

Project Name:	PLU 52 Battery	Turn Around	
Project Number:	012919042	Routine	☒
P.O. Number:	2RP 5314	Rush:	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.5/0.4	Thermometer ID	2e	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS01	S	3/29/19	1700	2'	1	X	X	X
FS02	S		1702	2'-4'	1			
FS04	S		1710	2'	1			
FS03	S		1705	2'-4'	1			
SW01	S		1405	0-2'	1			
SW02	S		1630	0-4'	1			
SW03	S		1635	0-4'	1			
SW04	S		1640	0-4'	1			
SW05	S		1645	0-4'	1			
SW06	S		1650	0-4'	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 Anna Byers		3/29/19	2		04/01/2019 12:17
3		04/3/19	4		
5		1125	6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 619861

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 2 of 2

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

Work Order Comments

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

Project Name:	PLU 52 Battery	Turn Around	
Project Number:	012919042	Routine	☒
P.O. Number:	2RP 5314	Rush:	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5+0.4	Thermometer ID:	D2
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW07	S	~~4/5/19~~ 3/29/19	1655	0-2'	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	Anna Byers		3/29/19			
2						04/01/2019 17:22
3			4/3/19			
4						
5			1105			
6						

Revised Date 051418 Rev. 2018.1

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

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Inter-Office Shipment

IOS Number : 126130

Date/Time:	04.08.2019 11:53	Created by:	Katie Lowe	Please send report to:	Kalei Stout
Lab# From:	**Midland**	Delivery Priority:		Address:	1211 W. Florida Ave
Lab# To:	**Houston**	Air Bill No.:	0774915573670	E-Mail:	kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM		Analytes	Sign
619861-001	S	FS01	03.29.2019 17:00	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-002	S	FS02	03.29.2019 17:02	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-003	S	FS04	03.29.2019 17:10	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-004	S	FS03	03.29.2019 17:05	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-005	S	SW01	03.29.2019 16:05	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-006	S	SW02	03.29.2019 16:30	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-007	S	SW03	03.29.2019 16:35	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-008	S	SW04	03.29.2019 16:40	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-009	S	SW05	03.29.2019 16:45	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-010	S	SW06	03.29.2019 16:50	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		
619861-011	S	SW07	03.29.2019 16:55	E300	Inorganic Anions by EPA 300	04.09.2019	04.26.2019	KLS	CL		

Inter Office Shipment or Sample Comments:

Relinquished By: 

Katie Lowe

Date Relinquished: 04.08.2019

Received By:

Date Received: 04.09.2019 09:00

Cooler Temperature: 3.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 126130

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Katie Lowe **Date Sent:** 04/08/2019 11:53 AM

Received By: Taha Hedib **Date Received:** 04/09/2019 09:00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

_____

Checklist reviewed by:

Date: 04/09/2019

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/03/2019 11:25:00 AM

Work Order #: 619861

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)?	.4
#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: 04/03/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/03/2019

Kalei Stout

Analytical Report 619862

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 52 Battery

012919049

11-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

11-APR-19

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

Reference: XENCO Report No(s): **619862**
PLU 52 Battery
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 619862. 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. 619862 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	03-29-19 15:45	4 ft	619862-001
PH01A	S	03-29-19 16:05	10 ft	619862-002
PH02	S	03-29-19 13:00	1 ft	619862-003
PH02A	S	03-29-19 13:10	4 ft	619862-004
PH03	S	03-29-19 13:05	0.5 ft	619862-005
PH03A	S	03-29-19 13:15	4 ft	619862-006
PH04	S	03-29-19 13:30	0.5 ft	619862-007
PH04A	S	03-29-19 13:37	4 ft	619862-008
PH05	S	03-29-19 13:45	0.5 ft	619862-009
PH05A	S	03-29-19 13:55	4.5 ft	619862-010

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085164 Inorganic Anions by EPA 300

Lab Sample ID 620421-001 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: 619862-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.

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

Batch: LBA-3085188 BTEX by EPA 8021B

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

Batch: LBA-3085235 BTEX by EPA 8021B

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

Certificate of Analysis Summary 619862

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919049
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-03-19 12:04 pm
Report Date: 11-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	619862-001		619862-002		619862-003		619862-004		619862-005		619862-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	4- ft		10- ft		1- ft		4- ft		0.5- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-19 15:45		Mar-29-19 16:05		Mar-29-19 13:00		Mar-29-19 13:10		Mar-29-19 13:05		Mar-29-19 13:15	
BTEX by EPA 8021B	***Extracted:***	Apr-10-19 12:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00		Apr-09-19 17:00	
	Analyzed:	Apr-10-19 16:46		Apr-10-19 04:59		Apr-10-19 05:18		Apr-10-19 05:37		Apr-10-19 05:56		Apr-10-19 06:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.994	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.994	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		5.30	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		18.7	1.99	<0.00404	0.00404	<0.00400	0.00400	<0.00398	0.00398	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		6.78	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		25.5	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		30.8	0.994	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50	
	Analyzed:	Apr-10-19 14:26		Apr-10-19 14:32		Apr-10-19 14:39		Apr-10-19 15:00		Apr-10-19 15:06		Apr-10-19 16:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2840	24.8	158	4.95	68.1	4.97	203	5.04	100	4.99	1540	24.9
TPH by SW8015 Mod	***Extracted:***	Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00	
	Analyzed:	Apr-06-19 00:25		Apr-06-19 00:45		Apr-06-19 01:06		Apr-06-19 01:27		Apr-06-19 01:47		Apr-06-19 02:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		3660	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		4960	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		191	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		8810	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		8620	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 619862

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919049
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Apr-03-19 12:04 pm
Report Date: 11-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	619862-007		619862-008		619862-009		619862-010					
	Field Id:	PH04		PH04A		PH05		PH05A					
	Depth:	0.5- ft		4- ft		0.5- ft		4.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-29-19 13:30		Mar-29-19 13:37		Mar-29-19 13:45		Mar-29-19 13:55					
BTEX by EPA 8021B	***Extracted:***	Apr-09-19 17:00		Apr-09-19 17:00		Apr-10-19 12:00		Apr-10-19 12:00					
	Analyzed:	Apr-10-19 06:34		Apr-10-19 07:48		Apr-10-19 16:06		Apr-10-19 16:26					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	0.0132	0.00200				
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	0.136	0.00400				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	0.0529	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	0.189	0.00200				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	0.202	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50		Apr-09-19 16:50					
	Analyzed:	Apr-10-19 16:49		Apr-10-19 16:56		Apr-10-19 17:03		Apr-10-19 17:09					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		24.9	4.97	378	5.01	27.4	5.01	35.7	5.01				
TPH by SW8015 Mod	***Extracted:***	Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00		Apr-05-19 11:00					
	Analyzed:	Apr-06-19 02:29		Apr-06-19 02:50		Apr-06-19 03:11		Apr-06-19 03:31					
	Units/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	38.8	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	147	15.0	484	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	16.8	15.0	61.5	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	164	15.0	584	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0	147	15.0	523	15.0				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-001	Date Collected:	03.29.19 15.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2840**	24.8	mg/kg	04.10.19 14.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3660**	15.0	mg/kg	04.06.19 00.25		1
Diesel Range Organics (DRO)	C10C28DRO	**4960**	15.0	mg/kg	04.06.19 00.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**191**	15.0	mg/kg	04.06.19 00.25		1
Total TPH	PHC635	**8810**	15.0	mg/kg	04.06.19 00.25		1
Total GRO-DRO	PHC628	**8620**	15.0	mg/kg	04.06.19 00.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	04.06.19 00.25	
o-Terphenyl	84-15-1	119	%	70-135	04.06.19 00.25	

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-001	Date Collected:	03.29.19 15.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.994	0.994	mg/kg	04.10.19 16.46	U	500
Toluene	108-88-3	<0.994	0.994	mg/kg	04.10.19 16.46	U	500
Ethylbenzene	100-41-4	**5.30**	0.994	mg/kg	04.10.19 16.46		500
m,p-Xylenes	179601-23-1	**18.7**	1.99	mg/kg	04.10.19 16.46		500
o-Xylene	95-47-6	**6.78**	0.994	mg/kg	04.10.19 16.46		500
Total Xylenes	1330-20-7	**25.5**	0.994	mg/kg	04.10.19 16.46		500
Total BTEX		**30.8**	0.994	mg/kg	04.10.19 16.46		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.10.19 16.46	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 16.46	

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-002	Date Collected:	03.29.19 16.05	Sample Depth:	10 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**158**	4.95	mg/kg	04.10.19 14.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.06.19 00.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.06.19 00.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.06.19 00.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.06.19 00.45	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.06.19 00.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.19 00.45	
o-Terphenyl	84-15-1	86	%	70-135	04.06.19 00.45	

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-002	Date Collected:	03.29.19 16.05	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.10.19 04.59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.10.19 04.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.10.19 04.59	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.10.19 04.59	

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id: **PH02** Matrix: Soil Date Received:04.03.19 12.04
Lab Sample Id: 619862-003 Date Collected: 03.29.19 13.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 04.09.19 16.50 Basis: Wet Weight
Seq Number: 3085164

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.1**	4.97	mg/kg	04.10.19 14.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 04.05.19 11.00 Basis: Wet Weight
Seq Number: 3084905

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 01.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 01.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 01.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 01.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 01.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.06.19 01.06	
o-Terphenyl	84-15-1	88	%	70-135	04.06.19 01.06	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-003	Date Collected:	03.29.19 13.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 05.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 05.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 05.18	
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.10.19 05.18	

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-004	Date Collected:	03.29.19 13.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**203**	5.04	mg/kg	04.10.19 15.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 01.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 01.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 01.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 01.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 01.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.06.19 01.27	
o-Terphenyl	84-15-1	85	%	70-135	04.06.19 01.27	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-004	Date Collected:	03.29.19 13.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 05.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 05.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.10.19 05.37	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.10.19 05.37	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-005	Date Collected:	03.29.19 13.05	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**100**	4.99	mg/kg	04.10.19 15.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 01.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 01.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 01.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 01.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.06.19 01.47	
o-Terphenyl	84-15-1	84	%	70-135	04.06.19 01.47	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-005	Date Collected:	03.29.19 13.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 05.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 05.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.10.19 05.56	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.10.19 05.56	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-006	Date Collected:	03.29.19 13.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1540**	24.9	mg/kg	04.10.19 16.42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 02.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 02.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 02.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 02.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 02.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.19 02.08	
o-Terphenyl	84-15-1	84	%	70-135	04.06.19 02.08	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-006	Date Collected:	03.29.19 13.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 06.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 06.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.10.19 06.15	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 06.15	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-007	Date Collected:	03.29.19 13.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.9**	4.97	mg/kg	04.10.19 16.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 02.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 02.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 02.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 02.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	04.06.19 02.29	
o-Terphenyl	84-15-1	81	%	70-135	04.06.19 02.29	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-007	Date Collected:	03.29.19 13.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 06.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 06.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.10.19 06.34	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.10.19 06.34	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-008	Date Collected:	03.29.19 13.37	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**378**	5.01	mg/kg	04.10.19 16.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 02.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.06.19 02.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.06.19 02.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.06.19 02.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.06.19 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.19 02.50	
o-Terphenyl	84-15-1	85	%	70-135	04.06.19 02.50	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-008	Date Collected:	03.29.19 13.37	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.09.19 17.00	Basis:	Wet Weight
Seq Number:	3085188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 07.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 07.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 07.48	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.10.19 07.48	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-009	Date Collected:	03.29.19 13.45	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.4**	5.01	mg/kg	04.10.19 17.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.06.19 03.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**147**	15.0	mg/kg	04.06.19 03.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.8**	15.0	mg/kg	04.06.19 03.11		1
Total TPH	PHC635	**164**	15.0	mg/kg	04.06.19 03.11		1
Total GRO-DRO	PHC628	**147**	15.0	mg/kg	04.06.19 03.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	04.06.19 03.11	
o-Terphenyl	84-15-1	90	%	70-135	04.06.19 03.11	

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LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-009	Date Collected:	03.29.19 13.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 16.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.10.19 16.06	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.10.19 16.06	

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-010	Date Collected:	03.29.19 13.55	Sample Depth:	4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.09.19 16.50	Basis:	Wet Weight
Seq Number:	3085164				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.7**	5.01	mg/kg	04.10.19 17.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.05.19 11.00	Basis:	Wet Weight
Seq Number:	3084905				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**38.8**	15.0	mg/kg	04.06.19 03.31		1
Diesel Range Organics (DRO)	C10C28DRO	**484**	15.0	mg/kg	04.06.19 03.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**61.5**	15.0	mg/kg	04.06.19 03.31		1
Total TPH	PHC635	**584**	15.0	mg/kg	04.06.19 03.31		1
Total GRO-DRO	PHC628	**523**	15.0	mg/kg	04.06.19 03.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	04.06.19 03.31	
o-Terphenyl	84-15-1	89	%	70-135	04.06.19 03.31	

Certificate of Analytical Results 619862

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	04.03.19 12.04
Lab Sample Id:	619862-010	Date Collected:	03.29.19 13.55	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 16.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 16.26	U	1
Ethylbenzene	100-41-4	**0.0132**	0.00200	mg/kg	04.10.19 16.26		1
m,p-Xylenes	179601-23-1	**0.136**	0.00400	mg/kg	04.10.19 16.26		1
o-Xylene	95-47-6	**0.0529**	0.00200	mg/kg	04.10.19 16.26		1
Total Xylenes	1330-20-7	**0.189**	0.00200	mg/kg	04.10.19 16.26		1
Total BTEX		**0.202**	0.00200	mg/kg	04.10.19 16.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.10.19 16.26	
4-Bromofluorobenzene	460-00-4	121	%	70-130	04.10.19 16.26	

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 619862

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Solid Date Prep: 04.09.19
MB Sample Id: 7675407-1-BLK LCS Sample Id: 7675407-1-BKS LCSD Sample Id: 7675407-1-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	261	104	246	98	90-110	6	20	mg/kg	04.10.19 11:29	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 619862-003 MS Sample Id: 619862-003 S MSD Sample Id: 619862-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	68.1	249	518	181	511	178	90-110	1	20	mg/kg	04.10.19 14:46	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3085164 Matrix: Soil Date Prep: 04.09.19
Parent Sample Id: 620421-001 MS Sample Id: 620421-001 S MSD Sample Id: 620421-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.93	250	257	100	240	95	90-110	7	20	mg/kg	04.10.19 13:04	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084905 Matrix: Solid Date Prep: 04.05.19
MB Sample Id: 7675252-1-BLK LCS Sample Id: 7675252-1-BKS LCSD Sample Id: 7675252-1-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	988	99	70-135	6	20	mg/kg	04.05.19 18:46	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	964	96	70-135	10	20	mg/kg	04.05.19 18:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		128		114		70-135	%	04.05.19 18:46
o-Terphenyl	104		110		109		70-135	%	04.05.19 18:46

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 619862

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3084905 Matrix: Soil Date Prep: 04.05.19
Parent Sample Id: 619861-001 MS Sample Id: 619861-001 S MSD Sample Id: 619861-001 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)	1700	998	2380	68	2390	69	70-135	0	20	mg/kg	04.05.19 19:51	X
Diesel Range Organics (DRO)	3300	998	4240	94	4270	97	70-135	1	20	mg/kg	04.05.19 19:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		127		70-135	%	04.05.19 19:51
o-Terphenyl	127		128		70-135	%	04.05.19 19:51

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085188 Matrix: Solid Date Prep: 04.09.19
MB Sample Id: 7675465-1-BLK LCS Sample Id: 7675465-1-BKS LCSD Sample Id: 7675465-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0959	96	0.0962	97	70-130	0	35	mg/kg	04.10.19 01:50	
Toluene	<0.000455	0.0998	0.0970	97	0.0967	97	70-130	0	35	mg/kg	04.10.19 01:50	
Ethylbenzene	<0.000564	0.0998	0.0900	90	0.0894	90	70-130	1	35	mg/kg	04.10.19 01:50	
m,p-Xylenes	<0.00101	0.200	0.178	89	0.178	89	70-130	0	35	mg/kg	04.10.19 01:50	
o-Xylene	<0.000344	0.0998	0.0901	90	0.0919	92	70-130	2	35	mg/kg	04.10.19 01:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		98		100		70-130	%	04.10.19 01:50
4-Bromofluorobenzene	89		91		99		70-130	%	04.10.19 01:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085235 Matrix: Solid Date Prep: 04.10.19
MB Sample Id: 7675486-1-BLK LCS Sample Id: 7675486-1-BKS LCSD Sample Id: 7675486-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0984	99	0.106	107	70-130	7	35	mg/kg	04.10.19 13:46	
Toluene	<0.000454	0.0996	0.100	100	0.107	108	70-130	7	35	mg/kg	04.10.19 13:46	
Ethylbenzene	<0.000563	0.0996	0.0940	94	0.100	101	70-130	6	35	mg/kg	04.10.19 13:46	
m,p-Xylenes	<0.00101	0.199	0.187	94	0.200	101	70-130	7	35	mg/kg	04.10.19 13:46	
o-Xylene	<0.000343	0.0996	0.0935	94	0.101	102	70-130	8	35	mg/kg	04.10.19 13:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		100		70-130	%	04.10.19 13:46
4-Bromofluorobenzene	88		95		99		70-130	%	04.10.19 13:46

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

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

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

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

QC Summary 619862

LT Environmental, Inc.

PLU 52 Battery

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

Seq Number: 3085188 Matrix: Soil Date Prep: 04.09.19

Parent Sample Id: 619861-005 MS Sample Id: 619861-005 S MSD Sample Id: 619861-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000493	0.101	0.0857	84	0.0786	79	70-130	9	35	mg/kg	04.10.19 02:29	
Toluene	<0.000459	0.101	0.0515	51	0.0428	43	70-130	18	35	mg/kg	04.10.19 02:29	X
Ethylbenzene	<0.000569	0.101	0.0339	34	0.0270	27	70-130	23	35	mg/kg	04.10.19 02:29	X
m,p-Xylenes	<0.00102	0.202	0.104	51	0.0927	47	70-130	11	35	mg/kg	04.10.19 02:29	X
o-Xylene	0.000372	0.101	0.0822	81	0.0789	79	70-130	4	35	mg/kg	04.10.19 02:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	04.10.19 02:29
4-Bromofluorobenzene	103		100		70-130	%	04.10.19 02:29

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

Seq Number: 3085235 Matrix: Soil Date Prep: 04.10.19

Parent Sample Id: 620613-001 MS Sample Id: 620613-001 S MSD Sample Id: 620613-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0932	93	0.0782	79	70-130	18	35	mg/kg	04.10.19 14:26	
Toluene	<0.000457	0.100	0.0926	93	0.0787	79	70-130	16	35	mg/kg	04.10.19 14:26	
Ethylbenzene	<0.000566	0.100	0.0849	85	0.0718	72	70-130	17	35	mg/kg	04.10.19 14:26	
m,p-Xylenes	<0.00102	0.200	0.169	85	0.144	72	70-130	16	35	mg/kg	04.10.19 14:26	
o-Xylene	<0.000345	0.100	0.0849	85	0.0728	73	70-130	15	35	mg/kg	04.10.19 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		97		70-130	%	04.10.19 14:26
4-Bromofluorobenzene	99		98		70-130	%	04.10.19 14:26

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: 619862

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU 57 Battery	Turn Around	
Project Number:	012919049	Routine	☒
P.O. Number:	2RP 5314	Rush:	
Sampler's Name:	Anna Bayese	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5 | 0.4	Thermometer ID	IR
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Work Order Notes

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

Sample Comments

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH01	S	3/29	1545	4'	1			
PH01A	S		1605	10'	1			
PH02	S		1300	1'	1			
PH02A	S		1310	4'	1			
PH03	S		1305	0.5'	1			
PH03A	S		1315	4'	1			
PH04	S		1330	0.5'	1			
PH04A	S		1337	4'	1			
PH05	S		1345	0.5'	1			
PH05A	S	↓	1355	4.5'	1			

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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	Anna Bayese		03/29/19
2			
3			4/3/19
4			
5			1675
6			

Received by: (Signature) — Date/Time: 04/01/2019 17:12

Revised Date 051

ORIGIN ID:CAOA (575) 887-6245
XENCO
PAC N MAIL
910 W PIERCE ST

CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 02APR19
ACTWGT: 58.00 LB
CAD: 10181370/INET4100
DIMS: 26x14x14 IN

BILL RECIPIENT

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

MIDLAND TX 79711
(806) 794-1296

REF:
INV:
PO:
DEPT:

565J1/D7E5/23AD

J191019018701uv

FedEx Express

TRK# 0201 7748 6665 6197

WED - 03 APR HOLD
STANDARD OVERNIGHT

HLD
MAFA
LBB

TX-US

41 MAFA

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

Client: LT Environmental, Inc.

Date/ Time Received: 04/03/2019 12:04:02 PM

Work Order #: 619862

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)?	.4
#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: 04/03/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/03/2019

Kalei Stout

Analytical Report 623713

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 52 Battery

13-MAY-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)

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)

13-MAY-19

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

Reference: XENCO Report No(s): **623713**
PLU 52 Battery
Project Address: Delaware Basin

Ashley Ager:

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) 623713. 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. 623713 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 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH06	S	05-02-19 09:10	0.5 ft	623713-001
PH06A	S	05-02-19 09:25	4.5 ft	623713-002
PH07	S	05-02-19 10:07	2.0 ft	623713-003
PH07A	S	05-02-19 10:15	4.5 ft	623713-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088597 BTEX by EPA 8021B

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

Certificate of Analysis Summary 623713

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-09-19 04:30 pm
Report Date: 13-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	623713-001		623713-002		623713-003		623713-004					
	Field Id:	PH06		PH06A		PH07		PH07A					
	Depth:	0.5- ft		4.5- ft		2.0- ft		4.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-02-19 09:10		May-02-19 09:25		May-02-19 10:07		May-02-19 10:15					
BTEX by EPA 8021B	***Extracted:***	May-09-19 16:30		May-09-19 16:30		May-09-19 16:30		May-09-19 16:30					
	Analyzed:	May-10-19 03:15		May-10-19 03:34		May-10-19 03:53		May-10-19 04:12					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401	<0.00402	0.00402				
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	May-10-19 12:00		May-10-19 12:00		May-10-19 12:00		May-10-19 12:00					
	Analyzed:	May-10-19 19:49		May-10-19 19:54		May-10-19 19:59		May-10-19 20:04					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<5.00	5.00	7.69	5.02	130	4.98	327	4.97				
TPH by SW8015 Mod	***Extracted:***	May-09-19 17:00		May-09-19 17:00		May-09-19 17:00		May-09-19 17:00					
	Analyzed:	May-10-19 05:28		May-10-19 05:49		May-10-19 06:09		May-10-19 06:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	61.5	14.9	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	61.5	14.9	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0	61.5	14.9	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-001	Date Collected:	05.02.19 09.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.10.19 19.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 05.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 05.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 05.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 05.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 05.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.10.19 05.28	
o-Terphenyl	84-15-1	96	%	70-135	05.10.19 05.28	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-001	Date Collected:	05.02.19 09.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.10.19 03.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.10.19 03.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	05.10.19 03.15	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.10.19 03.15	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-002	Date Collected:	05.02.19 09.25	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.69**	5.02	mg/kg	05.10.19 19.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 05.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 05.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 05.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 05.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 05.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.10.19 05.49	
o-Terphenyl	84-15-1	107	%	70-135	05.10.19 05.49	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-002	Date Collected:	05.02.19 09.25	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.10.19 03.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 03.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.10.19 03.34	
4-Bromofluorobenzene	460-00-4	80	%	70-130	05.10.19 03.34	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-003	Date Collected:	05.02.19 10.07	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130**	4.98	mg/kg	05.10.19 19.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.10.19 06.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**61.5**	14.9	mg/kg	05.10.19 06.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.10.19 06.09	U	1
Total TPH	PHC635	**61.5**	14.9	mg/kg	05.10.19 06.09		1
Total GRO-DRO	PHC628	**61.5**	14.9	mg/kg	05.10.19 06.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.10.19 06.09	
o-Terphenyl	84-15-1	101	%	70-135	05.10.19 06.09	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-003	Date Collected:	05.02.19 10.07	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.10.19 03.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 03.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.10.19 03.53	
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.10.19 03.53	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-004	Date Collected:	05.02.19 10.15	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**327**	4.97	mg/kg	05.10.19 20.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 06.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 06.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 06.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 06.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 06.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.10.19 06.29	
o-Terphenyl	84-15-1	97	%	70-135	05.10.19 06.29	

Certificate of Analytical Results 623713

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623713-004	Date Collected:	05.02.19 10.15	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.10.19 04.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.10.19 04.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.10.19 04.12	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.10.19 04.12	

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 623713

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Solid Date Prep: 05.10.19
MB Sample Id: 7677645-1-BLK LCS Sample Id: 7677645-1-BKS LCSD Sample Id: 7677645-1-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	251	100	90-110	0	20	mg/kg	05.10.19 17:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Soil Date Prep: 05.10.19
Parent Sample Id: 623709-001 MS Sample Id: 623709-001 S MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.04	252	257	102	257	102	90-110	0	20	mg/kg	05.10.19 17:55	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Soil Date Prep: 05.10.19
Parent Sample Id: 623712-001 MS Sample Id: 623712-001 S MSD Sample Id: 623712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	249	379	98	381	98	90-110	1	20	mg/kg	05.10.19 19:07	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088608 Matrix: Solid Date Prep: 05.09.19
MB Sample Id: 7677599-1-BLK LCS Sample Id: 7677599-1-BKS LCSD Sample Id: 7677599-1-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	1010	101	1030	103	70-135	2	20	mg/kg	05.09.19 22:25	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1040	104	70-135	1	20	mg/kg	05.09.19 22:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		123		129		70-135	%	05.09.19 22:25
o-Terphenyl	97		116		121		70-135	%	05.09.19 22:25

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

QC Summary 623713

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088608 Matrix: Soil Date Prep: 05.09.19
Parent Sample Id: 623710-002 MS Sample Id: 623710-002 S MSD Sample Id: 623710-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	10.1	1000	1010	100	996	99	70-135	1	20	mg/kg	05.09.19 23:26	
Diesel Range Organics (DRO)	10.1	1000	1000	99	1000	99	70-135	0	20	mg/kg	05.09.19 23:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		123		70-135	%	05.09.19 23:26
o-Terphenyl	126		118		70-135	%	05.09.19 23:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3088597 Matrix: Solid Date Prep: 05.09.19
MB Sample Id: 7677588-1-BLK LCS Sample Id: 7677588-1-BKS LCSD Sample Id: 7677588-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.111	111	0.113	113	70-130	2	35	mg/kg	05.09.19 21:17	
Toluene	<0.000455	0.0998	0.103	103	0.104	104	70-130	1	35	mg/kg	05.09.19 21:17	
Ethylbenzene	<0.000564	0.0998	0.109	109	0.109	109	70-130	0	35	mg/kg	05.09.19 21:17	
m,p-Xylenes	<0.00101	0.200	0.226	113	0.227	114	70-130	0	35	mg/kg	05.09.19 21:17	
o-Xylene	<0.000344	0.0998	0.110	110	0.112	112	70-130	2	35	mg/kg	05.09.19 21:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		100		104		70-130	%	05.09.19 21:17
4-Bromofluorobenzene	74		80		87		70-130	%	05.09.19 21:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3088597 Matrix: Soil Date Prep: 05.09.19
Parent Sample Id: 623709-001 MS Sample Id: 623709-001 S MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000538	0.100	0.114	113	0.111	109	70-130	3	35	mg/kg	05.09.19 21:55	
Toluene	0.000458	0.100	0.104	104	0.101	100	70-130	3	35	mg/kg	05.09.19 21:55	
Ethylbenzene	<0.000567	0.100	0.109	109	0.106	105	70-130	3	35	mg/kg	05.09.19 21:55	
m,p-Xylenes	<0.00102	0.201	0.227	113	0.221	110	70-130	3	35	mg/kg	05.09.19 21:55	
o-Xylene	<0.000346	0.100	0.111	111	0.108	107	70-130	3	35	mg/kg	05.09.19 21:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	05.09.19 21:55
4-Bromofluorobenzene	88		86		70-130	%	05.09.19 21:55

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: 623713

www.xenco.com Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(970) 385-1096	Email:	aagers@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 52 Battery	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5314	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.9/0.8	Thermometer ID	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH06	S	5/1/19	910	0.5'	2			
PH06A	S	5/2/19	925	4.5'	2			
PH07	S	5/2/19	1007	2.0'	1			
PH07A	S	5/2/19	1015	4.5'	2			

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		5/8/19 9:50	2		05/08/2019 10:05
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: 05/09/2019 04:30:00 PM

Work Order #: 623713

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

Temperature Measuring device used :

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 05/09/2019

Checklist reviewed by: Jessica Kramer Date: 05/10/2019

Jessica Kramer

Analytical Report 623711

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 52 Battery

13-MAY-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)

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)

13-MAY-19

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

Reference: XENCO Report No(s): **623711**
PLU 52 Battery
Project Address: Delaware Basin

Ashley Ager:

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) 623711. 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. 623711 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 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW09	S	05-06-19 10:25	0 - 4.5 ft	623711-001
SW08	S	05-01-19 13:35	0 - 4.5 ft	623711-002
SW10	S	05-06-19 11:45	0 - 4.5 ft	623711-003
FS06	S	05-01-19 15:00	4.5 ft	623711-004
FS07	S	05-06-19 10:30	4.5 ft	623711-005

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088597 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected;
Samples affected are: 623711-003.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 623711

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-09-19 04:30 pm
Report Date: 13-MAY-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	623711-001		623711-002		623711-003		623711-004		623711-005	
	Field Id:	SW09		SW08		SW10		FS06		FS07	
	Depth:	0-4.5 ft		0-4.5 ft		0-4.5 ft		4.5- ft		4.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-19 10:25		May-01-19 13:35		May-06-19 11:45		May-01-19 15:00		May-06-19 10:30	
BTEX by EPA 8021B	***Extracted:***	May-09-19 16:30		May-09-19 16:30		May-09-19 16:30		May-09-19 16:30		May-09-19 16:30	
	Analyzed:	May-10-19 00:44		May-10-19 01:03		May-10-19 01:22		May-10-19 01:41		May-10-19 02:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00198	0.00198	0.0364	0.00200	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	0.0205	0.00200	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397	0.432	0.00399	<0.00402	0.00402	<0.00404	0.00404
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	0.107	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	0.539	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	0.596	0.00200	<0.00201	0.00201	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	May-10-19 12:00		May-10-19 12:00		May-10-19 12:00		May-10-19 12:00		May-10-19 12:00	
	Analyzed:	May-10-19 18:37		May-10-19 18:42		May-10-19 18:47		May-10-19 18:52		May-11-19 16:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		332	5.02	260	5.00	437	4.97	1370	24.9	1540	25.2
TPH by SW8015 Mod	***Extracted:***	May-09-19 17:00		May-09-19 17:00		May-09-19 17:00		May-09-19 17:00		May-09-19 17:00	
	Analyzed:	May-10-19 01:26		May-10-19 01:47		May-10-19 02:06		May-10-19 02:27		May-10-19 02:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	15.7	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	153	15.0	219	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	31.5	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	185	15.0	235	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	153	15.0	235	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-001	Date Collected:	05.06.19 10.25	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**332**	5.02	mg/kg	05.10.19 18.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 01.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 01.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 01.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 01.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 01.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.10.19 01.26	
o-Terphenyl	84-15-1	104	%	70-135	05.10.19 01.26	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-001	Date Collected:	05.06.19 10.25	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.10.19 00.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.10.19 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	05.10.19 00.44	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.10.19 00.44	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-002	Date Collected:	05.01.19 13.35	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**260**	5.00	mg/kg	05.10.19 18.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 01.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 01.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 01.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 01.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.10.19 01.47	
o-Terphenyl	84-15-1	99	%	70-135	05.10.19 01.47	

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-002	Date Collected:	05.01.19 13.35	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.10.19 01.03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.10.19 01.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.10.19 01.03	
4-Bromofluorobenzene	460-00-4	78	%	70-130	05.10.19 01.03	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-003	Date Collected:	05.06.19 11.45	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**437**	4.97	mg/kg	05.10.19 18.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 02.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**153**	15.0	mg/kg	05.10.19 02.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**31.5**	15.0	mg/kg	05.10.19 02.06		1
Total TPH	PHC635	**185**	15.0	mg/kg	05.10.19 02.06		1
Total GRO-DRO	PHC628	**153**	15.0	mg/kg	05.10.19 02.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.10.19 02.06	
o-Terphenyl	84-15-1	106	%	70-135	05.10.19 02.06	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-003	Date Collected:	05.06.19 11.45	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 01.22	U	1
Toluene	108-88-3	**0.0364**	0.00200	mg/kg	05.10.19 01.22		1
Ethylbenzene	100-41-4	**0.0205**	0.00200	mg/kg	05.10.19 01.22		1
m,p-Xylenes	179601-23-1	**0.432**	0.00399	mg/kg	05.10.19 01.22		1
o-Xylene	95-47-6	**0.107**	0.00200	mg/kg	05.10.19 01.22		1
Total Xylenes	1330-20-7	**0.539**	0.00200	mg/kg	05.10.19 01.22		1
Total BTEX		**0.596**	0.00200	mg/kg	05.10.19 01.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.10.19 01.22	
4-Bromofluorobenzene	460-00-4	132	%	70-130	05.10.19 01.22	**

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-004	Date Collected:	05.01.19 15.00	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1370**	24.9	mg/kg	05.10.19 18.52		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.7**	15.0	mg/kg	05.10.19 02.27		1
Diesel Range Organics (DRO)	C10C28DRO	**219**	15.0	mg/kg	05.10.19 02.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 02.27	U	1
Total TPH	PHC635	**235**	15.0	mg/kg	05.10.19 02.27		1
Total GRO-DRO	PHC628	**235**	15.0	mg/kg	05.10.19 02.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.10.19 02.27	
o-Terphenyl	84-15-1	106	%	70-135	05.10.19 02.27	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-004	Date Collected:	05.01.19 15.00	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.10.19 01.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.10.19 01.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	05.10.19 01.41	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.10.19 01.41	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-005	Date Collected:	05.06.19 10.30	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.10.19 12.00	Basis:	Wet Weight
Seq Number:	3088730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1540**	25.2	mg/kg	05.11.19 16.40		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.19 17.00	Basis:	Wet Weight
Seq Number:	3088608				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 02.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 02.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 02.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 02.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.10.19 02.47	
o-Terphenyl	84-15-1	106	%	70-135	05.10.19 02.47	

Certificate of Analytical Results 623711

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	05.09.19 16.30
Lab Sample Id:	623711-005	Date Collected:	05.06.19 10.30	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	SCM	Date Prep:	05.09.19 16.30	Basis:	Wet Weight
Seq Number:	3088597				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.10.19 02.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.10.19 02.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	05.10.19 02.00	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.10.19 02.00	

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 623711

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Solid Date Prep: 05.10.19
MB Sample Id: 7677645-1-BLK LCS Sample Id: 7677645-1-BKS LCSD Sample Id: 7677645-1-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	251	100	90-110	0	20	mg/kg	05.10.19 17:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Soil Date Prep: 05.10.19
Parent Sample Id: 623709-001 MS Sample Id: 623709-001 S MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.04	252	257	102	257	102	90-110	0	20	mg/kg	05.10.19 17:55	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088730 Matrix: Soil Date Prep: 05.10.19
Parent Sample Id: 623712-001 MS Sample Id: 623712-001 S MSD Sample Id: 623712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	136	249	379	98	381	98	90-110	1	20	mg/kg	05.10.19 19:07	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088608 Matrix: Solid Date Prep: 05.09.19
MB Sample Id: 7677599-1-BLK LCS Sample Id: 7677599-1-BKS LCSD Sample Id: 7677599-1-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	1010	101	1030	103	70-135	2	20	mg/kg	05.09.19 22:25	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1040	104	70-135	1	20	mg/kg	05.09.19 22:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		123		129		70-135	%	05.09.19 22:25
o-Terphenyl	97		116		121		70-135	%	05.09.19 22:25

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

QC Summary 623711

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3088608 Matrix: Soil Date Prep: 05.09.19
Parent Sample Id: 623710-002 MS Sample Id: 623710-002 S MSD Sample Id: 623710-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	10.1	1000	1010	100	996	99	70-135	1	20	mg/kg	05.09.19 23:26	
Diesel Range Organics (DRO)	10.1	1000	1000	99	1000	99	70-135	0	20	mg/kg	05.09.19 23:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		123		70-135	%	05.09.19 23:26
o-Terphenyl	126		118		70-135	%	05.09.19 23:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3088597 Matrix: Solid Date Prep: 05.09.19
MB Sample Id: 7677588-1-BLK LCS Sample Id: 7677588-1-BKS LCSD Sample Id: 7677588-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.111	111	0.113	113	70-130	2	35	mg/kg	05.09.19 21:17	
Toluene	<0.000455	0.0998	0.103	103	0.104	104	70-130	1	35	mg/kg	05.09.19 21:17	
Ethylbenzene	<0.000564	0.0998	0.109	109	0.109	109	70-130	0	35	mg/kg	05.09.19 21:17	
m,p-Xylenes	<0.00101	0.200	0.226	113	0.227	114	70-130	0	35	mg/kg	05.09.19 21:17	
o-Xylene	<0.000344	0.0998	0.110	110	0.112	112	70-130	2	35	mg/kg	05.09.19 21:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		100		104		70-130	%	05.09.19 21:17
4-Bromofluorobenzene	74		80		87		70-130	%	05.09.19 21:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3088597 Matrix: Soil Date Prep: 05.09.19
Parent Sample Id: 623709-001 MS Sample Id: 623709-001 S MSD Sample Id: 623709-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000538	0.100	0.114	113	0.111	109	70-130	3	35	mg/kg	05.09.19 21:55	
Toluene	0.000458	0.100	0.104	104	0.101	100	70-130	3	35	mg/kg	05.09.19 21:55	
Ethylbenzene	<0.000567	0.100	0.109	109	0.106	105	70-130	3	35	mg/kg	05.09.19 21:55	
m,p-Xylenes	<0.00102	0.201	0.227	113	0.221	110	70-130	3	35	mg/kg	05.09.19 21:55	
o-Xylene	<0.000346	0.100	0.111	111	0.108	107	70-130	3	35	mg/kg	05.09.19 21:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	05.09.19 21:55
4-Bromofluorobenzene	88		86		70-130	%	05.09.19 21:55

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: 623711

www.xenco.com Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(970) 385-1096	Email:	aager@ltenv.com & abyers@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 52 Battery	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5314	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	0.4 | 0.3	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 8021)	Chloride (EPA 300.0)
SW09	S	5/6/19	1025	0-4.5'	2	X	X	X
SW08	S	5/1/19	1335	0-4.5'	2	X	X	X
SW10	S	5/6/19	1145	0-4.5'	2	X	X	X
FS06	S	5/1/19	1500	4.5'	2	X	X	X
FS07	S	5/6/19	1030	4.5'	2	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		5/8/19 9:50	2		05/08/2019 10:05
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: 05/09/2019 04:30:00 PM

Work Order #: 623711

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 05/09/2019

Checklist reviewed by: Jessica Kramer Date: 05/10/2019

Analytical Report 625614

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 52

29-MAY-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)

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)

29-MAY-19

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

Reference: XENCO Report No(s): **625614**
PLU 52
Project Address: Delaware Basin

Ashley Ager:

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) 625614. 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. 625614 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 625614

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH03B	S	05-24-19 12:30	6 ft	625614-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090378 Chloride by EPA 300

Lab Sample ID 625614-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625614-001.

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

Batch: LBA-3090399 BTEX by EPA 8021B

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

Lab Sample ID 625614-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625614-001.

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

Certificate of Analysis Summary 625614

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Tue May-28-19 07:36 am
Report Date: 29-MAY-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	625614-001					
	Field Id:	PH03B					
	Depth:	6- ft					
	Matrix:	SOIL					
	Sampled:	May-24-19 12:30					
BTEX by EPA 8021B	***Extracted:***	May-28-19 15:15					
	Analyzed:	May-28-19 17:08					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398				
o-Xylene		<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199				
Total BTEX		<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	May-28-19 12:40					
	Analyzed:	May-28-19 15:09					
	Units/RL:	mg/kg	RL				
Chloride		393	4.97				
TPH by SW8015 Mod	***Extracted:***	May-28-19 15:00					
	Analyzed:	May-28-19 22:28					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		<15.0	15.0				
Total GRO-DRO		<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 625614

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625614-001	Date Collected:	05.24.19 12.30	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**393**	4.97	mg/kg	05.28.19 15.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.19 15.00	Basis:	Wet Weight
Seq Number:	3090497				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.28.19 22.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.28.19 22.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.28.19 22.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.28.19 22.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.28.19 22.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.28.19 22.28	
o-Terphenyl	84-15-1	75	%	70-135	05.28.19 22.28	

Certificate of Analytical Results 625614

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625614-001	Date Collected:	05.24.19 12.30	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.28.19 15.15	Basis:	Wet Weight
Seq Number:	3090399				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.28.19 17.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.28.19 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.28.19 17.08	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.28.19 17.08	

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 625614

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678646-1-BLK LCS Sample Id: 7678646-1-BKS LCSD Sample Id: 7678646-1-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	234	94	233	93	90-110	0	20	mg/kg	05.28.19 13:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625608-001 MS Sample Id: 625608-001 S MSD Sample Id: 625608-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	749	250	952	81	952	81	90-110	0	20	mg/kg	05.28.19 13:30	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625614-001 MS Sample Id: 625614-001 S MSD Sample Id: 625614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	393	249	615	89	613	88	90-110	0	20	mg/kg	05.28.19 15:17	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090497 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678780-1-BLK LCS Sample Id: 7678780-1-BKS LCSD Sample Id: 7678780-1-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	945	95	961	96	70-135	2	20	mg/kg	05.28.19 18:45	
Diesel Range Organics (DRO)	<8.13	1000	902	90	924	92	70-135	2	20	mg/kg	05.28.19 18:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		93		99		70-135	%	05.28.19 18:45
o-Terphenyl	104		97		104		70-135	%	05.28.19 18:45

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 625614

LT Environmental, Inc.

PLU 52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090497 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625610-001 MS Sample Id: 625610-001 S MSD Sample Id: 625610-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	910	91	874	88	70-135	4	20	mg/kg	05.28.19 19:59	
Diesel Range Organics (DRO)	<8.11	998	843	84	855	86	70-135	1	20	mg/kg	05.28.19 19:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		82		70-135	%	05.28.19 19:59
o-Terphenyl	76		84		70-135	%	05.28.19 19:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090399 Matrix: Solid Date Prep: 05.28.19
MB Sample Id: 7678713-1-BLK LCS Sample Id: 7678713-1-BKS LCSD Sample Id: 7678713-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.101	101	0.103	103	70-130	2	35	mg/kg	05.28.19 15:16	
Toluene	<0.00200	0.0998	0.102	102	0.101	101	70-130	1	35	mg/kg	05.28.19 15:16	
Ethylbenzene	<0.00200	0.0998	0.115	115	0.114	114	70-130	1	35	mg/kg	05.28.19 15:16	
m,p-Xylenes	<0.00399	0.200	0.241	121	0.236	117	70-130	2	35	mg/kg	05.28.19 15:16	
o-Xylene	<0.00200	0.0998	0.114	114	0.113	113	70-130	1	35	mg/kg	05.28.19 15:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		89		90		70-130	%	05.28.19 15:16
4-Bromofluorobenzene	104		101		101		70-130	%	05.28.19 15:16

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090399 Matrix: Soil Date Prep: 05.28.19
Parent Sample Id: 625614-001 MS Sample Id: 625614-001 S MSD Sample Id: 625614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0761	76	0.0652	65	70-130	15	35	mg/kg	05.28.19 15:54	X
Toluene	<0.00200	0.100	0.0766	77	0.0741	73	70-130	3	35	mg/kg	05.28.19 15:54	
Ethylbenzene	<0.00200	0.100	0.0856	86	0.0751	74	70-130	13	35	mg/kg	05.28.19 15:54	
m,p-Xylenes	<0.00401	0.200	0.180	90	0.136	68	70-130	28	35	mg/kg	05.28.19 15:54	X
o-Xylene	<0.00200	0.100	0.0855	86	0.0629	62	70-130	30	35	mg/kg	05.28.19 15:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		70-130	%	05.28.19 15:54
4-Bromofluorobenzene	104		111		70-130	%	05.28.19 15:54

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: 625414

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:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178 Email:		aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP - 5314	Rush: 24hr	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.5/0.3	Thermometer ID:	VE	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
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)
PH03 B	S	05/24/19	1230	6'	1	x	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

discrete

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	Robert McAfee	Corbin	5/24/19 14:47	2		5/29/19
3				4		1536
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/28/2019 07:36:00 AM

Work Order #: 625614

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/28/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/28/2019

Jessica Kramer

Analytical Report 628540

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 52

28-JUN-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)

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-JUN-19

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

Reference: XENCO Report No(s): **628540**
PLU 52
Project Address: Delaware Basin

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) 628540. 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. 628540 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 628540

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW 11	S	06-19-19 13:20	0 - 5 ft	628540-001
SW 12	S	06-19-19 13:25	0 - 5 ft	628540-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 52

Project ID:
Work Order Number(s): *628540*

Report Date: *28-JUN-19*
Date Received: *06/20/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093292 Chloride by EPA 300

Lab Sample ID 628585-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 628540-002.

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

Batch: LBA-3093834 BTEX by EPA 8021B

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

Certificate of Analysis Summary 628540

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-20-19 02:10 pm
Report Date: 28-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	628540-001		628540-002					
	Field Id:	SW 11		SW 12					
	Depth:	0-5 ft		0-5 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-19-19 13:20		Jun-19-19 13:25					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jun-27-19 05:00		Jun-27-19 05:00					
	Analyzed:	Jun-27-19 19:28		Jun-27-19 19:51					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201				
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jun-22-19 17:00		Jun-22-19 17:30					
	Analyzed:	Jun-24-19 21:22		Jun-22-19 23:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		66.7	5.00	160	5.00				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jun-22-19 09:00		Jun-22-19 09:00					
	Analyzed:	Jun-23-19 07:21		Jun-23-19 07:44					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 628540

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW 11**	Matrix:	Soil	Date Received:	06.20.19 14.10
Lab Sample Id:	628540-001	Date Collected:	06.19.19 13.20	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.00	Basis:	Wet Weight
Seq Number:	3093379			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.7**	5.00	mg/kg	06.24.19 21.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.19 09.00	Basis:	Wet Weight
Seq Number:	3093428			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.23.19 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.23.19 07.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.23.19 07.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.23.19 07.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.23.19 07.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.23.19 07.21	
o-Terphenyl	84-15-1	97	%	70-135	06.23.19 07.21	

Certificate of Analytical Results 628540

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW 11**	Matrix:	Soil	Date Received:	06.20.19 14.10
Lab Sample Id:	628540-001	Date Collected:	06.19.19 13.20	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.27.19 05.00	Basis:	Wet Weight
Seq Number:	3093834			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.27.19 19.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.19 19.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.27.19 19.28	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.27.19 19.28	

Certificate of Analytical Results 628540

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW 12**	Matrix:	Soil	Date Received:	06.20.19 14.10
Lab Sample Id:	628540-002	Date Collected:	06.19.19 13.25	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.30	Basis:	Wet Weight
Seq Number:	3093292			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**160**	5.00	mg/kg	06.22.19 23.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.19 09.00	Basis:	Wet Weight
Seq Number:	3093428			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.23.19 07.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.23.19 07.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.23.19 07.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.23.19 07.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.23.19 07.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.23.19 07.44	
o-Terphenyl	84-15-1	99	%	70-135	06.23.19 07.44	

Certificate of Analytical Results 628540

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW 12**	Matrix:	Soil	Date Received:	06.20.19 14.10
Lab Sample Id:	628540-002	Date Collected:	06.19.19 13.25	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.27.19 05.00	Basis:	Wet Weight
Seq Number:	3093834			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.27.19 19.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.27.19 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.27.19 19.51	
4-Bromofluorobenzene	460-00-4	112	%	70-130	06.27.19 19.51	

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 628540

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093379 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680534-1-BLK LCS Sample Id: 7680534-1-BKS LCSD Sample Id: 7680534-1-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	270	108	271	108	90-110	0	20	mg/kg	06.24.19 19:02	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680535-1-BLK LCS Sample Id: 7680535-1-BKS LCSD Sample Id: 7680535-1-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	248	99	248	99	90-110	0	20	mg/kg	06.22.19 23:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093379 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628303-006 MS Sample Id: 628303-006 S MSD Sample Id: 628303-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1390	250	1590	80	1590	80	90-110	0	20	mg/kg	06.24.19 19:16	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093379 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628303-011 MS Sample Id: 628303-011 S MSD Sample Id: 628303-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	628	250	872	98	871	97	90-110	0	20	mg/kg	06.24.19 20:24	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628540-002 MS Sample Id: 628540-002 S MSD Sample Id: 628540-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	160	250	363	81	363	81	90-110	0	20	mg/kg	06.22.19 23:29	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 628540

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628585-002 MS Sample Id: 628585-002 S MSD Sample Id: 628585-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	53.9	250	320	106	320	106	90-110	0	20	mg/kg	06.23.19 01:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093428 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680667-1-BLK LCS Sample Id: 7680667-1-BKS LCSD Sample Id: 7680667-1-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	1180	118	1160	116	70-135	2	20	mg/kg	06.22.19 23:37	
Diesel Range Organics (DRO)	<15.0	1000	1070	107	1120	112	70-135	5	20	mg/kg	06.22.19 23:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		101		98		70-135	%	06.22.19 23:37
o-Terphenyl	119		101		98		70-135	%	06.22.19 23:37

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093428 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628450-021 MS Sample Id: 628450-021 S MSD Sample Id: 628450-021 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	1130	113	1200	120	70-135	6	20	mg/kg	06.23.19 00:48	
Diesel Range Organics (DRO)	<15.0	997	1030	103	1110	111	70-135	7	20	mg/kg	06.23.19 00:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		97		70-135	%	06.23.19 00:48
o-Terphenyl	93		97		70-135	%	06.23.19 00:48

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 628540

LT Environmental, Inc.

PLU 52

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

Seq Number: 3093834 Matrix: Solid Date Prep: 06.27.19

MB Sample Id: 7680951-1-BLK LCS Sample Id: 7680951-1-BKS LCSD Sample Id: 7680951-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0837	84	0.0862	86	70-130	3	35	mg/kg	06.27.19 05:46	
Toluene	<0.000453	0.0994	0.102	103	0.102	102	70-130	0	35	mg/kg	06.27.19 05:46	
Ethylbenzene	<0.00199	0.0994	0.116	117	0.116	116	70-130	0	35	mg/kg	06.27.19 05:46	
m,p-Xylenes	<0.00101	0.199	0.234	118	0.232	116	70-130	1	35	mg/kg	06.27.19 05:46	
o-Xylene	0.000349	0.0994	0.112	113	0.111	111	70-130	1	35	mg/kg	06.27.19 05:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		88		90		70-130	%	06.27.19 05:46
4-Bromofluorobenzene	118		118		116		70-130	%	06.27.19 05:46

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

Seq Number: 3093834 Matrix: Soil Date Prep: 06.27.19

Parent Sample Id: 627832-001 MS Sample Id: 627832-001 S MSD Sample Id: 627832-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0777	77	0.0748	75	70-130	4	35	mg/kg	06.27.19 06:33	
Toluene	<0.000458	0.101	0.0806	80	0.0747	75	70-130	8	35	mg/kg	06.27.19 06:33	
Ethylbenzene	<0.00201	0.101	0.0815	81	0.0756	76	70-130	8	35	mg/kg	06.27.19 06:33	
m,p-Xylenes	<0.00402	0.201	0.154	77	0.142	71	70-130	8	35	mg/kg	06.27.19 06:33	
o-Xylene	<0.00201	0.101	0.0777	77	0.0723	72	70-130	7	35	mg/kg	06.27.19 06:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		92		70-130	%	06.27.19 06:33
4-Bromofluorobenzene	117		114		70-130	%	06.27.19 06:33

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

Chain of Custody

Work Order No: ML 82628540

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	Company Name:	XTO - Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM
Phone:	(432) 704-5178	Email:	dmoir@ltenv.com rmcafee@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 52	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5314	Rush: 3day	
Sampler's Name:	Robert M.	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3	Thermometer ID	TN100	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SW 11	S	06/19/19	1320	0-5'	1	X	X	X	Composite
SW12	S	06/19/19	1325	0-5'	1	X	X	X	Composite

Work Order Notes

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Robert Mayfield		04-20-19 14:40			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Inter-Office Shipment

IOS Number **41945**

Date/Time: 06/20/19 16:34
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Carlos Castro
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
628540-001	S	SW 11	06/19/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	
628540-001	S	SW 11	06/19/19 13:20	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628540-001	S	SW 11	06/19/19 13:20	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628540-002	S	SW 12	06/19/19 13:25	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628540-002	S	SW 12	06/19/19 13:25	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628540-002	S	SW 12	06/19/19 13:25	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 06/20/2019

Received By: Brianna Teel

Date Received: 06/21/2019 07:33

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 41945

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Carlos Castro **Date Sent:** 06/20/2019 04:34 PM

Received By: Brianna Teel **Date Received:** 06/21/2019 07:33 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 06/21/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/20/2019 02:10:00 PM

Work Order #: 628540

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)?	3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**Yes**	
#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**	Subbed to Xenco Midland
#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: Carlos Castro Date: 06/20/2019

Checklist reviewed by: Jessica Kramer Date: 06/21/2019

Jessica Kramer

Analytical Report 628566

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 52

30-JUN-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)

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)

30-JUN-19

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

Reference: XENCO Report No(s): **628566**
PLU 52
Project Address: Delaware Basin

Ashley Ager:

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) 628566. 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. 628566 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 628566

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS08	S	06-19-19 11:40	5 ft	628566-001
FS09	S	06-19-19 11:30	4.5 ft	628566-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093944 BTEX by EPA 8021B

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

Certificate of Analysis Summary 628566

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-20-19 02:00 pm
Report Date: 30-JUN-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	628566-001		628566-002			
	Field Id:	FS08		FS09			
	Depth:	5- ft		4.5- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	Jun-19-19 11:40		Jun-19-19 11:30			
BTEX by EPA 8021B	***Extracted:***	Jun-28-19 17:04		Jun-28-19 17:04			
SUB: T104704400-18-16	***Analyzed:***	Jun-30-19 09:21		Jun-30-19 09:44			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00200	0.00200		
Toluene		<0.00199	0.00199	<0.00200	0.00200		
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200		
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401		
o-Xylene		<0.00199	0.00199	<0.00200	0.00200		
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200		
Total BTEX		<0.00199	0.00199	<0.00200	0.00200		
Chloride by EPA 300	***Extracted:***	Jun-22-19 17:30		Jun-22-19 17:30			
SUB: T104704400-18-16	***Analyzed:***	Jun-23-19 00:41		Jun-23-19 00:49			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		485	5.00	634	5.00		
TPH by SW8015 Mod	***Extracted:***	Jun-23-19 12:00		Jun-23-19 12:00			
SUB: T104704400-18-16	***Analyzed:***	Jun-24-19 07:52		Jun-24-19 08:17			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		20.1	15.0	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0		
Total TPH		20.1	15.0	<15.0	15.0		
Total GRO-DRO		20.1	15.0	<15.0	15.0		

Jessica Kramer
Project Assistant

Certificate of Analytical Results 628566

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628566-001	Date Collected:	06.19.19 11.40	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.30	Basis:	Wet Weight
Seq Number:	3093292			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**485**	5.00	mg/kg	06.23.19 00.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.23.19 12.00	Basis:	Wet Weight
Seq Number:	3093434			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.24.19 07.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**20.1**	15.0	mg/kg	06.24.19 07.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 07.52	U	1
Total TPH	PHC635	**20.1**	15.0	mg/kg	06.24.19 07.52		1
Total GRO-DRO	PHC628	**20.1**	15.0	mg/kg	06.24.19 07.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.24.19 07.52	
o-Terphenyl	84-15-1	91	%	70-135	06.24.19 07.52	

Certificate of Analytical Results 628566

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628566-001	Date Collected:	06.19.19 11.40	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	06.28.19 17.04	Basis:	Wet Weight
Seq Number:	3093944			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.19 09.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.19 09.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	06.30.19 09.21	
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.30.19 09.21	

Certificate of Analytical Results 628566

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628566-002	Date Collected:	06.19.19 11.30	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.30	Basis:	Wet Weight
Seq Number:	3093292			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**634**	5.00	mg/kg	06.23.19 00.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.23.19 12.00	Basis:	Wet Weight
Seq Number:	3093434			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.24.19 08.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.24.19 08.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 08.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.24.19 08.17	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.24.19 08.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.24.19 08.17	
o-Terphenyl	84-15-1	103	%	70-135	06.24.19 08.17	

Certificate of Analytical Results 628566

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628566-002	Date Collected:	06.19.19 11.30	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	06.28.19 17.04	Basis:	Wet Weight
Seq Number:	3093944			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.30.19 09.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 09.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.30.19 09.44	
1,4-Difluorobenzene	540-36-3	98	%	70-130	06.30.19 09.44	

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 628566

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680535-1-BLK LCS Sample Id: 7680535-1-BKS LCSD Sample Id: 7680535-1-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	248	99	248	99	90-110	0	20	mg/kg	06.22.19 23:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628540-002 MS Sample Id: 628540-002 S MSD Sample Id: 628540-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	160	250	363	81	363	81	90-110	0	20	mg/kg	06.22.19 23:29	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628585-002 MS Sample Id: 628585-002 S MSD Sample Id: 628585-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	53.9	250	320	106	320	106	90-110	0	20	mg/kg	06.23.19 01:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093434 Matrix: Solid Date Prep: 06.23.19
MB Sample Id: 7680671-1-BLK LCS Sample Id: 7680671-1-BKS LCSD Sample Id: 7680671-1-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)	9.45	1000	906	91	931	93	70-135	3	20	mg/kg	06.24.19 00:12	
Diesel Range Organics (DRO)	8.62	1000	1020	102	1030	103	70-135	1	20	mg/kg	06.24.19 00:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		77		72		70-135	%	06.24.19 00:12
o-Terphenyl	106		90		92		70-135	%	06.24.19 00:12

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 628566

LT Environmental, Inc.

PLU 52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093434 Matrix: Soil Date Prep: 06.23.19
Parent Sample Id: 628550-001 MS Sample Id: 628550-001 S MSD Sample Id: 628550-001 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)	10.9	998	966	96	952	94	70-135	1	20	mg/kg	06.24.19 01:24	
Diesel Range Organics (DRO)	9.40	998	996	99	1000	99	70-135	0	20	mg/kg	06.24.19 01:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		82		70-135	%	06.24.19 01:24
o-Terphenyl	95		91		70-135	%	06.24.19 01:24

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093944 Matrix: Solid Date Prep: 06.28.19
MB Sample Id: 7681016-1-BLK LCS Sample Id: 7681016-1-BKS LCSD Sample Id: 7681016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0718	72	0.0759	76	70-130	6	35	mg/kg	06.29.19 22:59	
Toluene	<0.00199	0.0996	0.0826	83	0.0855	86	70-130	3	35	mg/kg	06.29.19 22:59	
Ethylbenzene	0.000569	0.0996	0.0900	90	0.0945	95	70-130	5	35	mg/kg	06.29.19 22:59	
m,p-Xylenes	<0.00101	0.199	0.175	88	0.184	92	70-130	5	35	mg/kg	06.29.19 22:59	
o-Xylene	<0.00199	0.0996	0.0861	86	0.0897	90	70-130	4	35	mg/kg	06.29.19 22:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		91		92		70-130	%	06.29.19 22:59
4-Bromofluorobenzene	114		104		104		70-130	%	06.29.19 22:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093944 Matrix: Soil Date Prep: 06.28.19
Parent Sample Id: 629132-001 MS Sample Id: 629132-001 S MSD Sample Id: 629132-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0174	17	0.0189	19	70-130	8	35	mg/kg	06.29.19 23:46	X
Toluene	<0.00200	0.100	0.0266	27	0.0283	28	70-130	6	35	mg/kg	06.29.19 23:46	X
Ethylbenzene	<0.00200	0.100	0.0703	70	0.0661	65	70-130	6	35	mg/kg	06.29.19 23:46	X
m,p-Xylenes	<0.00401	0.200	0.0971	49	0.0985	49	70-130	1	35	mg/kg	06.29.19 23:46	X
o-Xylene	<0.00200	0.100	0.0516	52	0.0521	52	70-130	1	35	mg/kg	06.29.19 23:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		70-130	%	06.29.19 23:46
4-Bromofluorobenzene	113		114		70-130	%	06.29.19 23:46

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: ~~6285566~~ MAB 6/20/19
0285566

www.xenco.com Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP-5314	Rush:	3day
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3	Thermometer ID	T-NM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS08	S	06/19/19	1140	5'	1	X	X	X	Composite
FS09	S	06/19/19	1130	4.5'	1	X	X	X	Composite

ANALYSIS REQUEST

Work Order Notes

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Robert McAfee		06/20/19 14:00			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **41949**

Date/Time: 06/20/19 16:42
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Carlos Castro
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
628566-001	S	FS08	06/19/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	
628566-001	S	FS08	06/19/19 11:40	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628566-001	S	FS08	06/19/19 11:40	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628566-002	S	FS09	06/19/19 11:30	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628566-002	S	FS09	06/19/19 11:30	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628566-002	S	FS09	06/19/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 06/20/2019

Received By: Brianna Teel

Date Received: 06/21/2019 07:33

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 41949

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Carlos Castro **Date Sent:** 06/20/2019 04:42 PM

Received By: Brianna Teel **Date Received:** 06/21/2019 07:33 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 06/21/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/20/2019 02:00:00 PM

Work Order #: 628566

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)?	3	
#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?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**N/A**	
#8 Any missing/extra samples?	**Yes**	
#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**	Subbed to Xenco Midland
#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: Carlos Castro Date: 06/20/2019

Checklist reviewed by: Jessica Kramer Date: 06/21/2019

Jessica Kramer

Analytical Report 628563

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 52

30-JUN-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)

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)

30-JUN-19

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

Reference: XENCO Report No(s): **628563**
PLU 52
Project Address: Delaware Basin

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) 628563. 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. 628563 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 628563

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS10	S	06-19-19 14:20	4.5 ft	628563-001
FS11	S	06-19-19 14:10	6 ft	628563-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093944 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: 628563-001.

Certificate of Analysis Summary 628563

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-20-19 02:00 pm
Report Date: 30-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	628563-001		628563-002					
	Field Id:	FS10		FS11					
	Depth:	4.5- ft		6- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-19-19 14:20		Jun-19-19 14:10					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jun-28-19 17:04		Jun-28-19 17:04					
	Analyzed:	Jun-30-19 10:08		Jun-30-19 08:58					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		0.0695	0.00200	0.00957	0.00200				
m,p-Xylenes		0.0127	0.00399	<0.00400	0.00400				
o-Xylene		0.0738	0.00200	0.00223	0.00200				
Total Xylenes		0.0865	0.00200	0.00223	0.00200				
Total BTEX		0.156	0.00200	0.0118	0.00200				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jun-22-19 17:30		Jun-22-19 17:30					
	Analyzed:	Jun-23-19 00:27		Jun-23-19 00:34					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		889	5.00	4000	25.0				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jun-23-19 12:00		Jun-23-19 12:00					
	Analyzed:	Jun-24-19 07:03		Jun-24-19 07:28					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		105	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		719	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		17.7	15.0	<15.0	15.0				
Total TPH		842	15.0	<15.0	15.0				
Total GRO-DRO		824	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 628563

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628563-001	Date Collected:	06.19.19 14.20	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.30	Basis:	Wet Weight
Seq Number:	3093292			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**889**	5.00	mg/kg	06.23.19 00.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.23.19 12.00	Basis:	Wet Weight
Seq Number:	3093434			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**105**	15.0	mg/kg	06.24.19 07.03		1
Diesel Range Organics (DRO)	C10C28DRO	**719**	15.0	mg/kg	06.24.19 07.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.7**	15.0	mg/kg	06.24.19 07.03		1
Total TPH	PHC635	**842**	15.0	mg/kg	06.24.19 07.03		1
Total GRO-DRO	PHC628	**824**	15.0	mg/kg	06.24.19 07.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.24.19 07.03	
o-Terphenyl	84-15-1	102	%	70-135	06.24.19 07.03	

Certificate of Analytical Results 628563

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628563-001	Date Collected:	06.19.19 14.20	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	06.28.19 17.04	Basis:	Wet Weight
Seq Number:	3093944			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 10.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 10.08	U	1
Ethylbenzene	100-41-4	**0.0695**	0.00200	mg/kg	06.30.19 10.08		1
m,p-Xylenes	179601-23-1	**0.0127**	0.00399	mg/kg	06.30.19 10.08		1
o-Xylene	95-47-6	**0.0738**	0.00200	mg/kg	06.30.19 10.08		1
Total Xylenes	1330-20-7	**0.0865**	0.00200	mg/kg	06.30.19 10.08		1
Total BTEX		**0.156**	0.00200	mg/kg	06.30.19 10.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	06.30.19 10.08	
4-Bromofluorobenzene	460-00-4	154	%	70-130	06.30.19 10.08	**

Final 1.000

Certificate of Analytical Results 628563

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628563-002	Date Collected:	06.19.19 14.10	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.22.19 17.30	Basis:	Wet Weight
Seq Number:	3093292			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4000**	25.0	mg/kg	06.23.19 00.34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.23.19 12.00	Basis:	Wet Weight
Seq Number:	3093434			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.24.19 07.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.24.19 07.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 07.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.24.19 07.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.24.19 07.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.24.19 07.28	
o-Terphenyl	84-15-1	98	%	70-135	06.24.19 07.28	

Certificate of Analytical Results 628563

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	06.20.19 14.00
Lab Sample Id:	628563-002	Date Collected:	06.19.19 14.10	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	06.28.19 17.04	Basis:	Wet Weight
Seq Number:	3093944			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 08.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 08.58	U	1
Ethylbenzene	100-41-4	**0.00957**	0.00200	mg/kg	06.30.19 08.58		1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.30.19 08.58	U	1
o-Xylene	95-47-6	**0.00223**	0.00200	mg/kg	06.30.19 08.58		1
Total Xylenes	1330-20-7	**0.00223**	0.00200	mg/kg	06.30.19 08.58		1
Total BTEX		**0.0118**	0.00200	mg/kg	06.30.19 08.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.30.19 08.58	
4-Bromofluorobenzene	460-00-4	119	%	70-130	06.30.19 08.58	

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 628563

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Solid Date Prep: 06.22.19
MB Sample Id: 7680535-1-BLK LCS Sample Id: 7680535-1-BKS LCSD Sample Id: 7680535-1-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	248	99	248	99	90-110	0	20	mg/kg	06.22.19 23:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628540-002 MS Sample Id: 628540-002 S MSD Sample Id: 628540-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	160	250	363	81	363	81	90-110	0	20	mg/kg	06.22.19 23:29	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093292 Matrix: Soil Date Prep: 06.22.19
Parent Sample Id: 628585-002 MS Sample Id: 628585-002 S MSD Sample Id: 628585-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	53.9	250	320	106	320	106	90-110	0	20	mg/kg	06.23.19 01:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093434 Matrix: Solid Date Prep: 06.23.19
MB Sample Id: 7680671-1-BLK LCS Sample Id: 7680671-1-BKS LCSD Sample Id: 7680671-1-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)	9.45	1000	906	91	931	93	70-135	3	20	mg/kg	06.24.19 00:12	
Diesel Range Organics (DRO)	8.62	1000	1020	102	1030	103	70-135	1	20	mg/kg	06.24.19 00:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		77		72		70-135	%	06.24.19 00:12
o-Terphenyl	106		90		92		70-135	%	06.24.19 00:12

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 628563

LT Environmental, Inc.

PLU 52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093434 Matrix: Soil Date Prep: 06.23.19
Parent Sample Id: 628550-001 MS Sample Id: 628550-001 S MSD Sample Id: 628550-001 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)	10.9	998	966	96	952	94	70-135	1	20	mg/kg	06.24.19 01:24	
Diesel Range Organics (DRO)	9.40	998	996	99	1000	99	70-135	0	20	mg/kg	06.24.19 01:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		82		70-135	%	06.24.19 01:24
o-Terphenyl	95		91		70-135	%	06.24.19 01:24

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093944 Matrix: Solid Date Prep: 06.28.19
MB Sample Id: 7681016-1-BLK LCS Sample Id: 7681016-1-BKS LCSD Sample Id: 7681016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0718	72	0.0759	76	70-130	6	35	mg/kg	06.29.19 22:59	
Toluene	<0.00199	0.0996	0.0826	83	0.0855	86	70-130	3	35	mg/kg	06.29.19 22:59	
Ethylbenzene	0.000569	0.0996	0.0900	90	0.0945	95	70-130	5	35	mg/kg	06.29.19 22:59	
m,p-Xylenes	<0.00101	0.199	0.175	88	0.184	92	70-130	5	35	mg/kg	06.29.19 22:59	
o-Xylene	<0.00199	0.0996	0.0861	86	0.0897	90	70-130	4	35	mg/kg	06.29.19 22:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		91		92		70-130	%	06.29.19 22:59
4-Bromofluorobenzene	114		104		104		70-130	%	06.29.19 22:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093944 Matrix: Soil Date Prep: 06.28.19
Parent Sample Id: 629132-001 MS Sample Id: 629132-001 S MSD Sample Id: 629132-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0174	17	0.0189	19	70-130	8	35	mg/kg	06.29.19 23:46	X
Toluene	<0.00200	0.100	0.0266	27	0.0283	28	70-130	6	35	mg/kg	06.29.19 23:46	X
Ethylbenzene	<0.00200	0.100	0.0703	70	0.0661	65	70-130	6	35	mg/kg	06.29.19 23:46	X
m,p-Xylenes	<0.00401	0.200	0.0971	49	0.0985	49	70-130	1	35	mg/kg	06.29.19 23:46	X
o-Xylene	<0.00200	0.100	0.0516	52	0.0521	52	70-130	1	35	mg/kg	06.29.19 23:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		70-130	%	06.29.19 23:46
4-Bromofluorobenzene	113		114		70-130	%	06.29.19 23:46

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: 628563

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:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP-5314	Rush:	3 day
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3	Thermometer ID		
Received Intact:	(Yes) No		FN M007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS10	S	06/19/19	1420	4.5'	1	X	X	X	Composite
FS11	S	06/19/19	1410	6'	1	X	X	X	composite

Work Order Notes

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Robert McAfee		06/20/19 14:00			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Inter-Office Shipment

IOS Number **41942**

Date/Time: 06/20/19 16:23
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Carlos Castro
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
628563-001	S	FS10	06/19/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	
628563-001	S	FS10	06/19/19 14:20	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628563-001	S	FS10	06/19/19 14:20	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628563-002	S	FS11	06/19/19 14:10	SW8021B	BTEX by EPA 8021B	06/24/19	07/03/19	JKR	BR4FBZ BZ BZME EBZ X	
628563-002	S	FS11	06/19/19 14:10	E300_CL	Chloride by EPA 300	06/24/19	12/16/19	JKR	CL	
628563-002	S	FS11	06/19/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	06/24/19	07/03/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro
Date Relinquished: 06/20/2019

Received By: Brianna Teel
Date Received: 06/21/2019 07:33
Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 41942

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Carlos Castro **Date Sent:** 06/20/2019 04:23 PM

Received By: Brianna Teel **Date Received:** 06/21/2019 07:33 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 06/21/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/20/2019 02:00:00 PM

Work Order #: 628563

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)?	3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland
#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: Martha Castro Date: 06/20/2019

Checklist reviewed by: Jessica Kramer Date: 06/21/2019

Analytical Report 637684

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 52

012919042

24-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)

24-SEP-19

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

Reference: XENCO Report No(s): **637684**
PLU 52
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) 637684. 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. 637684 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 637684

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH05C	S	09-19-19 14:50	10.5 ft	637684-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 52

Project ID: *012919042*
Work Order Number(s): *637684*

Report Date: *24-SEP-19*
Date Received: *09/23/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102230 Chloride by EPA 300

Lab Sample ID 637690-006 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: 637684-001.

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

Batch: LBA-3102250 BTEX by EPA 8021B

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

Certificate of Analysis Summary 637684

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id: 012919042
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-23-19 12:57 pm
Report Date: 24-SEP-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	637684-001					
	Field Id:	PH05C					
	Depth:	10.5- ft					
	Matrix:	SOIL					
	Sampled:	Sep-19-19 14:50					
BTEX by EPA 8021B	***Extracted:***	Sep-23-19 15:00					
	Analyzed:	Sep-23-19 17:55					
	Units/RL:	mg/kg RL					
Benzene		<0.00101 0.00101					
Toluene		<0.00101 0.00101					
Ethylbenzene		<0.00101 0.00101					
m,p-Xylenes		<0.00201 0.00201					
o-Xylene		<0.00101 0.00101					
Total Xylenes		<0.00101 0.00101					
Total BTEX		<0.00101 0.00101					
Chloride by EPA 300	***Extracted:***	Sep-23-19 15:09					
	Analyzed:	Sep-23-19 15:56					
	Units/RL:	mg/kg RL					
Chloride		369 D 49.9					
TPH by SW8015 Mod	***Extracted:***	Sep-23-19 14:30					
	Analyzed:	Sep-23-19 18:12					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2					
Diesel Range Organics (DRO)		<50.2 50.2					
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2					
Total GRO-DRO		<50.2 50.2					
Total TPH		<50.2 50.2					

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637684

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**PH05C**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637684-001	Date Collected:	09.19.19 14.50	Sample Depth:	10.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**369**	49.9	mg/kg	09.23.19 20.42	D	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.23.19 18.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.23.19 18.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.23.19 18.12	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.23.19 18.12	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.23.19 18.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.23.19 18.12	
o-Terphenyl	84-15-1	105	%	70-135	09.23.19 18.12	

Certificate of Analytical Results 637684

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**PH05C**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637684-001	Date Collected:	09.19.19 14.50	Sample Depth:	10.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.23.19 17.55	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.23.19 17.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	09.23.19 17.55	
4-Bromofluorobenzene	460-00-4	97	%	70-130	09.23.19 17.55	

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 637684

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686698-1-BLK LCS Sample Id: 7686698-1-BKS LCSD Sample Id: 7686698-1-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	260	104	261	104	90-110	0	20	mg/kg	09.23.19 15:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637684-001 MS Sample Id: 637684-001 S MSD Sample Id: 637684-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	369	199	680	156	682	157	90-110	0	20	mg/kg	09.23.19 16:02	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637690-006 MS Sample Id: 637690-006 S MSD Sample Id: 637690-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.4	200	254	112	256	114	90-110	1	20	mg/kg	09.23.19 17:47	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102235 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686706-1-BLK LCS Sample Id: 7686706-1-BKS LCSD Sample Id: 7686706-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1130	113	1090	109	70-135	4	35	mg/kg	09.23.19 13:13	
Diesel Range Organics (DRO)	<50.0	1000	1300	130	1230	123	70-135	6	35	mg/kg	09.23.19 13:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		119		112		70-135	%	09.23.19 13:13
o-Terphenyl	94		108		101		70-135	%	09.23.19 13:13

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 637684

LT Environmental, Inc.

PLU 52

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102235 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637645-001 MS Sample Id: 637645-001 S MSD Sample Id: 637645-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1300	130	1190	119	70-135	9	35	mg/kg	09.23.19 15:06	
Diesel Range Organics (DRO)	<50.2	1000	1500	150	1400	140	70-135	7	35	mg/kg	09.23.19 15:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		112		70-135	%	09.23.19 15:06
o-Terphenyl	120		119		70-135	%	09.23.19 15:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102250 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686748-1-BLK LCS Sample Id: 7686748-1-BKS LCSD Sample Id: 7686748-1-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	0.0880	88	0.0913	91	70-130	4	35	mg/kg	09.23.19 13:18	
Toluene	<0.00100	0.100	0.0950	95	0.0962	96	70-130	1	35	mg/kg	09.23.19 13:18	
Ethylbenzene	<0.00100	0.100	0.111	111	0.113	113	71-129	2	35	mg/kg	09.23.19 13:18	
m,p-Xylenes	<0.00200	0.200	0.228	114	0.230	115	70-135	1	35	mg/kg	09.23.19 13:18	
o-Xylene	<0.00100	0.100	0.113	113	0.114	114	71-133	1	35	mg/kg	09.23.19 13:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		100		70-130	%	09.23.19 13:18
4-Bromofluorobenzene	94		112		107		70-130	%	09.23.19 13:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102250 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637645-001 MS Sample Id: 637645-001 S MSD Sample Id: 637645-001 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	0.0809	80	0.0831	82	70-130	3	35	mg/kg	09.23.19 14:37	
Toluene	<0.00101	0.101	0.0831	82	0.0856	85	70-130	3	35	mg/kg	09.23.19 14:37	
Ethylbenzene	<0.00101	0.101	0.0990	98	0.103	102	71-129	4	35	mg/kg	09.23.19 14:37	
m,p-Xylenes	<0.00201	0.201	0.204	101	0.207	102	70-135	1	35	mg/kg	09.23.19 14:37	
o-Xylene	<0.00101	0.101	0.102	101	0.105	104	71-133	3	35	mg/kg	09.23.19 14:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		111		70-130	%	09.23.19 14:37
4-Bromofluorobenzene	125		116		70-130	%	09.23.19 14:37

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: e637684

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 Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52	Turn Around	
Project Number:	012919042	Routine	☑
P.O. Number:	2RP-5314	Rush:	24H
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.2	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH05C	S	09/19/19	1450	10.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

discrete

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 Robert Mcafee		9/23/19 12:57	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: 09/23/2019 12:57:00 PM

Work Order #: 637684

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)?	3.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**Yes**
#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: 09/23/2019

Checklist reviewed by: Jessica Kramer Date: 09/23/2019

Analytical Report 637690

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 52 Battery

012919042

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

01-OCT-19

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

Reference: XENCO Report No(s): **637690**
PLU 52 Battery
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) 637690. 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. 637690 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 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS09A	S	09-20-19 10:50	5 ft	637690-001
FS03A	S	09-20-19 10:55	5 ft	637690-002
FS06A	S	09-20-19 11:00	5 ft	637690-003
FS04A	S	09-19-19 12:35	4 ft	637690-004
FS11A	S	09-19-19 13:50	6.5 ft	637690-005
FS12	S	09-19-19 12:00	4 ft	637690-006
FS07A	S	09-19-19 12:30	5 ft	637690-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 52 Battery

Project ID: *012919042*
Work Order Number(s): *637690*

Report Date: *01-OCT-19*
Date Received: *09/23/2019*

Sample receipt non conformances and comments:

Per clients email, corrected sample depth for FS07A to 5' NEW VERSION GENERATED JK 10/01/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102230 Chloride by EPA 300

Lab Sample ID 637690-006 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: 637690-001, -002, -003, -004, -005, -006, -007.

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

Batch: LBA-3102250 BTEX by EPA 8021B

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

Certificate of Analysis Summary 637690

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919042
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-23-19 12:57 pm
Report Date: 01-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	637690-001		637690-002		637690-003		637690-004		637690-005		637690-006	
	Field Id:	FS09A		FS03A		FS06A		FS04A		FS11A		FS12	
	Depth:	5- ft		5- ft		5- ft		4- ft		6.5- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-20-19 10:50		Sep-20-19 10:55		Sep-20-19 11:00		Sep-19-19 12:35		Sep-19-19 13:50		Sep-19-19 12:00	
BTEX by EPA 8021B	***Extracted:***	Sep-23-19 15:00		Sep-23-19 15:00		Sep-23-19 15:00		Sep-23-19 15:00		Sep-23-19 15:00		Sep-23-19 15:00	
	Analyzed:	Sep-23-19 20:13		Sep-23-19 20:32		Sep-23-19 20:52		Sep-23-19 21:12		Sep-23-19 21:31		Sep-23-19 21:51	
	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	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
Toluene		<0.00100	0.00100	<0.00101	0.00101	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
m,p-Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	<0.000992	0.000992	<0.000994	0.000994	<0.000998	0.000998	<0.000998	0.000998
Chloride by EPA 300	***Extracted:***	Sep-23-19 15:09		Sep-23-19 15:09		Sep-23-19 15:09		Sep-23-19 15:09		Sep-23-19 15:09		Sep-23-19 15:09	
	Analyzed:	Sep-23-19 17:08		Sep-23-19 17:14		Sep-23-19 17:21		Sep-23-19 17:28		Sep-23-19 17:34		Sep-23-19 17:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2490	50.0	1450	49.9	1030	49.4	65.5	9.90	1360	49.1	29.4	10.0
TPH by SW8015 Mod	***Extracted:***	Sep-23-19 14:30		Sep-23-19 14:30		Sep-23-19 14:30		Sep-23-19 14:30		Sep-23-19 14:30		Sep-23-19 14:30	
	Analyzed:	Sep-23-19 20:16		Sep-23-19 20:36		Sep-23-19 20:57		Sep-23-19 21:18		Sep-23-19 21:38		Sep-23-19 21:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		<50.1	50.1	<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.0	50.0	<49.8	49.8
Total GRO-DRO		<50.1	50.1	<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.0	50.0	<49.8	49.8
Total TPH		<50.1	50.1	<50.0	50.0	<50.2	50.2	<50.3	50.3	<50.0	50.0	<49.8	49.8

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 637690

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52 Battery

Project Id: 012919042
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-23-19 12:57 pm
Report Date: 01-OCT-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	637690-007					
	Field Id:	FS07A					
	Depth:	5- ft					
	Matrix:	SOIL					
	Sampled:	Sep-19-19 12:30					
BTEX by EPA 8021B	***Extracted:***	Sep-23-19 15:00					
	Analyzed:	Sep-23-19 22:11					
	Units/RL:	mg/kg	RL				
Benzene		<0.00101	0.00101				
Toluene		<0.00101	0.00101				
Ethylbenzene		<0.00101	0.00101				
m,p-Xylenes		<0.00202	0.00202				
o-Xylene		<0.00101	0.00101				
Total Xylenes		<0.00101	0.00101				
Total BTEX		<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Sep-23-19 15:09					
	Analyzed:	Sep-23-19 18:00					
	Units/RL:	mg/kg	RL				
Chloride		300	10.1				
TPH by SW8015 Mod	***Extracted:***	Sep-23-19 14:30					
	Analyzed:	Sep-23-19 22:19					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1				
Total GRO-DRO		<50.1	50.1				
Total TPH		<50.1	50.1				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS09A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-001	Date Collected:	09.20.19 10.50	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2490**	50.0	mg/kg	09.23.19 17.08		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.23.19 20.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.23.19 20.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.23.19 20.16	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.23.19 20.16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.23.19 20.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.23.19 20.16	
o-Terphenyl	84-15-1	108	%	70-135	09.23.19 20.16	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS09A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-001	Date Collected:	09.20.19 10.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.23.19 20.13	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.23.19 20.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.23.19 20.13	
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.23.19 20.13	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS03A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-002	Date Collected:	09.20.19 10.55	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1450**	49.9	mg/kg	09.23.19 17.14		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.19 20.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.19 20.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.19 20.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.23.19 20.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.19 20.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.23.19 20.36	
o-Terphenyl	84-15-1	98	%	70-135	09.23.19 20.36	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS03A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-002	Date Collected:	09.20.19 10.55	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.23.19 20.32	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.23.19 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.23.19 20.32	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.23.19 20.32	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-003	Date Collected:	09.20.19 11.00	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	49.4	mg/kg	09.23.19 17.21		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.23.19 20.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.23.19 20.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.23.19 20.57	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.23.19 20.57	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.23.19 20.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	09.23.19 20.57	
o-Terphenyl	84-15-1	94	%	70-135	09.23.19 20.57	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-003	Date Collected:	09.20.19 11.00	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.23.19 20.52	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1
Total BTEX		<0.000992	0.000992	mg/kg	09.23.19 20.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.23.19 20.52	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.23.19 20.52	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-004	Date Collected:	09.19.19 12.35	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.5**	9.90	mg/kg	09.23.19 17.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	09.23.19 21.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	09.23.19 21.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.23.19 21.18	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	09.23.19 21.18	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.23.19 21.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	09.23.19 21.18	
o-Terphenyl	84-15-1	99	%	70-135	09.23.19 21.18	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-004	Date Collected:	09.19.19 12.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.23.19 21.12	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1
Total BTEX		<0.000994	0.000994	mg/kg	09.23.19 21.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.23.19 21.12	
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.23.19 21.12	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS11A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-005	Date Collected:	09.19.19 13.50	Sample Depth:	6.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1360**	49.1	mg/kg	09.23.19 17.34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.23.19 21.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.23.19 21.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.23.19 21.38	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.23.19 21.38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.23.19 21.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	09.23.19 21.38	
o-Terphenyl	84-15-1	101	%	70-135	09.23.19 21.38	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS11A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-005	Date Collected:	09.19.19 13.50	Sample Depth:	6.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.23.19 21.31	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.23.19 21.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.23.19 21.31	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.23.19 21.31	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-006	Date Collected:	09.19.19 12.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.4**	10.0	mg/kg	09.23.19 17.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.23.19 21.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.23.19 21.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.23.19 21.59	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.23.19 21.59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.23.19 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	09.23.19 21.59	
o-Terphenyl	84-15-1	99	%	70-135	09.23.19 21.59	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-006	Date Collected:	09.19.19 12.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.23.19 21.51	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.23.19 21.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.23.19 21.51	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.23.19 21.51	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS07A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-007	Date Collected:	09.19.19 12.30	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.23.19 15.09	Basis:	Wet Weight
Seq Number:	3102230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**300**	10.1	mg/kg	09.23.19 18.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 14.30	Basis:	Wet Weight
Seq Number:	3102235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.23.19 22.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.23.19 22.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.23.19 22.19	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.23.19 22.19	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.23.19 22.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	09.23.19 22.19	
o-Terphenyl	84-15-1	97	%	70-135	09.23.19 22.19	

Certificate of Analytical Results 637690

LT Environmental, Inc., Arvada, CO

PLU 52 Battery

Sample Id:	**FS07A**	Matrix:	Soil	Date Received:	09.23.19 12.57
Lab Sample Id:	637690-007	Date Collected:	09.19.19 12.30	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.23.19 15.00	Basis:	Wet Weight
Seq Number:	3102250				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.23.19 22.11	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.23.19 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.23.19 22.11	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.23.19 22.11	

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 637690

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686698-1-BLK LCS Sample Id: 7686698-1-BKS LCSD Sample Id: 7686698-1-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	260	104	261	104	90-110	0	20	mg/kg	09.23.19 15:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637684-001 MS Sample Id: 637684-001 S MSD Sample Id: 637684-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	369	199	680	156	682	157	90-110	0	20	mg/kg	09.23.19 16:02	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102230 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637690-006 MS Sample Id: 637690-006 S MSD Sample Id: 637690-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.4	200	254	112	256	114	90-110	1	20	mg/kg	09.23.19 17:47	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102235 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686706-1-BLK LCS Sample Id: 7686706-1-BKS LCSD Sample Id: 7686706-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1130	113	1090	109	70-135	4	35	mg/kg	09.23.19 13:13	
Diesel Range Organics (DRO)	<50.0	1000	1300	130	1230	123	70-135	6	35	mg/kg	09.23.19 13:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		119		112		70-135	%	09.23.19 13:13
o-Terphenyl	94		108		101		70-135	%	09.23.19 13:13

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 637690

LT Environmental, Inc.

PLU 52 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102235 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637645-001 MS Sample Id: 637645-001 S MSD Sample Id: 637645-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1300	130	1190	119	70-135	9	35	mg/kg	09.23.19 15:06	
Diesel Range Organics (DRO)	<50.2	1000	1500	150	1400	140	70-135	7	35	mg/kg	09.23.19 15:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		112		70-135	%	09.23.19 15:06
o-Terphenyl	120		119		70-135	%	09.23.19 15:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102250 Matrix: Solid Date Prep: 09.23.19
MB Sample Id: 7686748-1-BLK LCS Sample Id: 7686748-1-BKS LCSD Sample Id: 7686748-1-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	0.0880	88	0.0913	91	70-130	4	35	mg/kg	09.23.19 13:18	
Toluene	<0.00100	0.100	0.0950	95	0.0962	96	70-130	1	35	mg/kg	09.23.19 13:18	
Ethylbenzene	<0.00100	0.100	0.111	111	0.113	113	71-129	2	35	mg/kg	09.23.19 13:18	
m,p-Xylenes	<0.00200	0.200	0.228	114	0.230	115	70-135	1	35	mg/kg	09.23.19 13:18	
o-Xylene	<0.00100	0.100	0.113	113	0.114	114	71-133	1	35	mg/kg	09.23.19 13:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		100		70-130	%	09.23.19 13:18
4-Bromofluorobenzene	94		112		107		70-130	%	09.23.19 13:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102250 Matrix: Soil Date Prep: 09.23.19
Parent Sample Id: 637645-001 MS Sample Id: 637645-001 S MSD Sample Id: 637645-001 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	0.0809	80	0.0831	82	70-130	3	35	mg/kg	09.23.19 14:37	
Toluene	<0.00101	0.101	0.0831	82	0.0856	85	70-130	3	35	mg/kg	09.23.19 14:37	
Ethylbenzene	<0.00101	0.101	0.0990	98	0.103	102	71-129	4	35	mg/kg	09.23.19 14:37	
m,p-Xylenes	<0.00201	0.201	0.204	101	0.207	102	70-135	1	35	mg/kg	09.23.19 14:37	
o-Xylene	<0.00101	0.101	0.102	101	0.105	104	71-133	3	35	mg/kg	09.23.19 14:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		111		70-130	%	09.23.19 14:37
4-Bromofluorobenzene	125		116		70-130	%	09.23.19 14:37

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

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

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

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

Chain of Custody

Work Order No: 637090

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 Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52 Battery	Turn Around	
Project Number:	012919042	Routine	☑
P.O. Number:	2RP-5314	Rush:	24 HR
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.2	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Work Order Notes / Sample Comments
FS09A	S	09/20/19	1050	5'	1	X	X	X	composite
FS03A			1055	5'		X	X	X	
FS06A			1100	5'		X	X	X	
FS04A		09/19/19	1235	4'		X	X	X	
FS11A			1350	6.5'		X	X	X	
FS12			1200	4'		X	X	X	
FS07A			1230	5'		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 Robert McAfee		9/23/19 12:57	2		
3			4		
5			6		

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.23.2019 12.57.00 PM

Work Order #: 637690

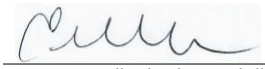
Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by:  Date: 09.23.2019

Elizabeth McClellan

Checklist reviewed by:  Date: 09.24.2019

Martha Castro

Analytical Report 638119

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 52

27-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)

27-SEP-19

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

Reference: XENCO Report No(s): **638119**
PLU 52
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) 638119. 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. 638119 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 638119

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW13	S	09-23-19 10:00	0 - 4.5 ft	638119-001
SW14	S	09-23-19 10:10	0 - 4.5 ft	638119-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102627 BTEX by EPA 8021B

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

Batch: LBA-3102649 TPH by SW8015 Mod

Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7686966-1-BSD.

Certificate of Analysis Summary 638119

LT Environmental, Inc., Arvada, CO

Project Name: PLU 52

Project Id:
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Sep-26-19 08:40 am
Report Date: 27-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	638119-001		638119-002					
	Field Id:	SW13		SW14					
	Depth:	0-4.5 ft		0-4.5 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Sep-23-19 10:00		Sep-23-19 10:10					
BTEX by EPA 8021B	***Extracted:***	Sep-26-19 09:09		Sep-26-19 09:09					
	Analyzed:	Sep-26-19 13:20		Sep-26-19 13:41					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00101	0.00101	<0.00101	0.00101				
Toluene		<0.00101	0.00101	<0.00101	0.00101				
Ethylbenzene		<0.00101	0.00101	<0.00101	0.00101				
m,p-Xylenes		<0.00202	0.00202	<0.00202	0.00202				
o-Xylene		<0.00101	0.00101	<0.00101	0.00101				
Total Xylenes		<0.00101	0.00101	<0.00101	0.00101				
Total BTEX		<0.00101	0.00101	<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Sep-26-19 10:09		Sep-26-19 10:09					
	Analyzed:	Sep-26-19 12:04		Sep-26-19 12:10					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		83.3	9.96	22.5	9.92				
TPH by SW8015 Mod	***Extracted:***	Sep-26-19 11:30		Sep-26-19 11:30					
	Analyzed:	Sep-26-19 20:41		Sep-26-19 21:02					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.3	50.3				
Diesel Range Organics (DRO)		<49.8	49.8	<50.3	50.3				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.3	50.3				
Total GRO-DRO		<49.8	49.8	<50.3	50.3				
Total TPH		<49.8	49.8	<50.3	50.3				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 638119

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	09.26.19 08.40
Lab Sample Id:	638119-001	Date Collected:	09.23.19 10.00	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.26.19 10.09	Basis:	Wet Weight
Seq Number:	3102603				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**83.3**	9.96	mg/kg	09.26.19 12.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.26.19 11.30	Basis:	Wet Weight
Seq Number:	3102649				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.26.19 20.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.26.19 20.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.26.19 20.41	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	09.26.19 20.41	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.26.19 20.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	09.26.19 20.41	
o-Terphenyl	84-15-1	104	%	70-135	09.26.19 20.41	

Certificate of Analytical Results 638119

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	09.26.19 08.40
Lab Sample Id:	638119-001	Date Collected:	09.23.19 10.00	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.26.19 09.09	Basis:	Wet Weight
Seq Number:	3102627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.26.19 13.20	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.26.19 13.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.26.19 13.20	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.26.19 13.20	

Certificate of Analytical Results 638119

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	09.26.19 08.40
Lab Sample Id:	638119-002	Date Collected:	09.23.19 10.10	Sample Depth:	0 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.26.19 10.09	Basis:	Wet Weight
Seq Number:	3102603				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.5**	9.92	mg/kg	09.26.19 12.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.26.19 11.30	Basis:	Wet Weight
Seq Number:	3102649				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	09.26.19 21.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	09.26.19 21.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.26.19 21.02	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	09.26.19 21.02	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.26.19 21.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	09.26.19 21.02	
o-Terphenyl	84-15-1	107	%	70-135	09.26.19 21.02	

Certificate of Analytical Results 638119

LT Environmental, Inc., Arvada, CO

PLU 52

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	09.26.19 08.40
Lab Sample Id:	638119-002	Date Collected:	09.23.19 10.10	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.26.19 09.09	Basis:	Wet Weight
Seq Number:	3102627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.26.19 13.41	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.26.19 13.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.26.19 13.41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.26.19 13.41	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 638119

LT Environmental, Inc.

PLU 52

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102603 Matrix: Solid Date Prep: 09.26.19
MB Sample Id: 7686921-1-BLK LCS Sample Id: 7686921-1-BKS LCSD Sample Id: 7686921-1-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	255	102	256	102	90-110	0	20	mg/kg	09.26.19 11:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102603 Matrix: Soil Date Prep: 09.26.19
Parent Sample Id: 638122-008 MS Sample Id: 638122-008 S MSD Sample Id: 638122-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.80	200	205	100	213	104	90-110	4	20	mg/kg	09.26.19 13:23	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102603 Matrix: Soil Date Prep: 09.26.19
Parent Sample Id: 638125-001 MS Sample Id: 638125-001 S MSD Sample Id: 638125-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	236	199	502	134	499	133	90-110	1	20	mg/kg	09.26.19 11:51	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102649 Matrix: Solid Date Prep: 09.26.19
MB Sample Id: 7686966-1-BLK LCS Sample Id: 7686966-1-BKS LCSD Sample Id: 7686966-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1170	117	1140	114	70-135	3	35	mg/kg	09.26.19 13:30	
Diesel Range Organics (DRO)	<15.0	1000	1250	125	1200	120	70-135	4	35	mg/kg	09.26.19 13:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		127		142	**	70-135	%	09.26.19 13:30
o-Terphenyl	110		118		146	**	70-135	%	09.26.19 13:30

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

QC Summary 638119

LT Environmental, Inc.

PLU 52

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102649 Matrix: Soil Date Prep: 09.26.19
Parent Sample Id: 638033-015 MS Sample Id: 638033-015 S MSD Sample Id: 638033-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1320	132	1210	121	70-135	9	35	mg/kg	09.26.19 16:14	
Diesel Range Organics (DRO)	<15.0	1000	1380	138	1350	136	70-135	2	35	mg/kg	09.26.19 16:14	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		116		70-135	%	09.26.19 16:14
o-Terphenyl	131		121		70-135	%	09.26.19 16:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102627 Matrix: Solid Date Prep: 09.26.19
MB Sample Id: 7687004-1-BLK LCS Sample Id: 7687004-1-BKS LCSD Sample Id: 7687004-1-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	0.0895	90	0.0875	88	70-130	2	35	mg/kg	09.26.19 11:01	
Toluene	<0.00100	0.100	0.0942	94	0.0930	93	70-130	1	35	mg/kg	09.26.19 11:01	
Ethylbenzene	<0.00100	0.100	0.111	111	0.111	111	71-129	0	35	mg/kg	09.26.19 11:01	
m,p-Xylenes	<0.00200	0.200	0.225	113	0.222	111	70-135	1	35	mg/kg	09.26.19 11:01	
o-Xylene	<0.00100	0.100	0.112	112	0.111	111	71-133	1	35	mg/kg	09.26.19 11:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		99		100		70-130	%	09.26.19 11:01
4-Bromofluorobenzene	97		113		107		70-130	%	09.26.19 11:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3102627 Matrix: Soil Date Prep: 09.26.19
Parent Sample Id: 638033-018 MS Sample Id: 638033-018 S MSD Sample Id: 638033-018 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	0.0891	88	0.0930	92	70-130	4	35	mg/kg	09.26.19 12:21	
Toluene	<0.00101	0.101	0.0980	97	0.101	100	70-130	3	35	mg/kg	09.26.19 12:21	
Ethylbenzene	<0.00101	0.101	0.106	105	0.110	109	71-129	4	35	mg/kg	09.26.19 12:21	
m,p-Xylenes	<0.00201	0.201	0.214	106	0.224	111	70-135	5	35	mg/kg	09.26.19 12:21	
o-Xylene	<0.00101	0.101	0.105	104	0.110	109	71-133	5	35	mg/kg	09.26.19 12:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		112		70-130	%	09.26.19 12:21
4-Bromofluorobenzene	111		115		70-130	%	09.26.19 12:21

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: 638119

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 Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 52	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP-5314	Rush:	24hr
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.4	Thermometer ID	T-NM-007	
Received Intact:	(Yes) No			
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 0=8021)	Chloride (EPA 300.0)	Sample Comments
SW13	S	09/23/19	1000	0-4.5'	1	X	X	X	Composite
SW14	S	09/23/19	1010	0-4.5'	1	X	X	X	Composite

Work Order Notes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		092617 840	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/26/2019 08:40:00 AM

Work Order #: 638119

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)?	1.4
#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)?	**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: 09/26/2019

Checklist reviewed by: Jessica Kramer Date: 09/26/2019

View facing south during excavation activities.

Project: 012919042	XTO Energy, Inc. Poker Lake Unit #052 Battery	LTE Advancing Opportunity
May 1, 2019	Photographic Log	

View facing southwest during excavation activities.

Project: 012919042	XTO Energy, Inc. Poker Lake Unit #052 Battery	LTE Advancing Opportunity
May 6, 2019	Photographic Log	

View facing north of the final excavation extent.

Project: 012919042	XTO Energy, Inc. Poker Lake Unit #052 Battery	LTE Advancing Opportunity
September 23, 2019	Photographic Log	