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	NAB1923458333
District RP	2RP-5598
Facility ID	
Application ID	pAB1923458103

Release Notification M9C0M-190813-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1923458333
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.124052° Longitude -103.854516°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Big Sinks 14-25-30 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 7/29/2019	API# *(if applicable)* 30-015-39508 (PLU CVX JV BS 8H)

Unit Letter	Section	Township	Range	County
N	14	25S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.27	Volume Recovered (bbls) 0
☐ 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)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Fire:
A fire was ignited on the well pad due to fluids exiting the flare and the fire extinguished itself. The sales compressor was down and more fluids were sent to the flare scrubber than the dump on the scrubber could accommodate. There were no injuries and no damage to equipment. No free fluids remained to be recovered. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1923458333
District RP	2rP-5598
Facility ID	
Application ID	pAB1923458103

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 that results in a fire or is the result of a fire
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos, Deborah McKinney, and Yolanda Jimenez (BLM) on 7/29/2019 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:

No free fluids remained to be recovered.

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: 8/12/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 8/22/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5598
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5598
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: 12/23/2019

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-5598
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 12/23/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

December 23, 2019

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

RE: Closure Request
Poker Lake Unit Big Sinks 14-25-30 Battery
Remediation Permit Number 2RP-5598
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site characterization, excavation, and soil sampling activities at the Poker Lake Unit Big Sinks 14-25-30 Battery (Site) located in Unit N, Section 14, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site characterization, excavation, and soil sampling activities was to address impacts to soil following the release of crude oil at the Site. Based on field observations, field screening, and laboratory analytical results for soil from excavation activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5598.

BACKGROUND

On July 29, 2019, fluid exited the on-site flare and ignited, causing a fire on the caliche well pad. The fire resulted in the release of 0.27 barrels (bbls) of crude oil. The fire extinguished itself and there were no injuries or damage to equipment. No fluid was recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 12, 2019 and was subsequently assigned RP Number 2RP-5598.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) C 03781, located approximately 3,944 feet east of the Site. The water well has a depth to groundwater of 325 feet bgs and a total depth of 720 feet bgs. Ground surface elevation at the water well location is 3,944 feet above mean sea level (amsl), which is approximately 64 feet lower in elevation than the Site. The closest continuously-flowing water or significant watercourse to the Site is a

freshwater emergent wetland located approximately 4,833 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area. The Site Receptors are shown on Figure 2.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND EXCAVATION ACTIVITIES

On August 27, 2019, LTE personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected three preliminary soil samples (SS01 through SS03) from within the release extent at a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.

Soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were delivered at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 3. Photographic documentation was conducted during assessment of the Site. Photographs are included in Attachment 1.

On October 23, 2019, LTE personnel returned to the Site to oversee excavation activities based on laboratory analytical results from preliminary soil sampling activities. Impacted soil was excavated via hydro-vacuum from the release area as indicated by laboratory analytical results for preliminary soil sample SS02. To direct excavation activities, LTE screened soil for volatile

aromatic hydrocarbons and chloride. Impacted soil was excavated to a depth of approximately one foot bgs. Following removal of impacted soil, LTE collected one 5-point composite soil sample from the sidewalls and floor of the excavation based on the excavation dimensions. The 5-point composite sample was collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of approximately one foot bgs. The excavation extent and excavation soil sample location are depicted on Figure 4. The excavation soil sample was collected, handled, and analyzed as described above and submitted to Xenco in Carlsbad, New Mexico.

The excavation extent measured approximately 100 square feet in area. A total of approximately 5 cubic yards of impacted soil was removed from the excavation. The impacted soil will be transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated preliminary soil sample SS01 and SS03 were compliant with the Closure Criteria for benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride. Laboratory analytical results for preliminary soil sample SS02 indicated TPH-GRO, TPH-DRO, and TPH concentrations exceeded the Closure Criteria. Impacted soil was excavated to a depth of approximately one foot bgs, and laboratory analytical results indicated excavation soil sample FS01 was compliant with the Closure Criteria for benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CLOSURE REQUEST

Preliminary soil samples SS01 through SS03 were collected from within the release extent at depths of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 and SS03. Laboratory analytical results for preliminary soil sample SS02 indicated TPH-GRO, TPH-DRO, and TPH concentrations exceeded the Closure Criteria. Impacted soil was excavated to a depth of approximately one foot bgs, and laboratory analytical results indicated excavation soil sample FS01 was compliant with the Closure Criteria for benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride. A total of approximately five cubic yards of impacted soil were removed from the Site.

Initial response efforts and excavation of impacted soil have mitigated impacts at the Site. XTO requests NFA for RP Number 2RP-5598. Upon approval of this Closure Request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

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
United States Bureau of Land Management – New Mexico

Appendices:

Figure 1	Site Location Map
Figure 2	Site Receptor Map
Figure 3	Preliminary Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Photographic Log
Attachment 2	Laboratory Analytical Reports

FIGURES

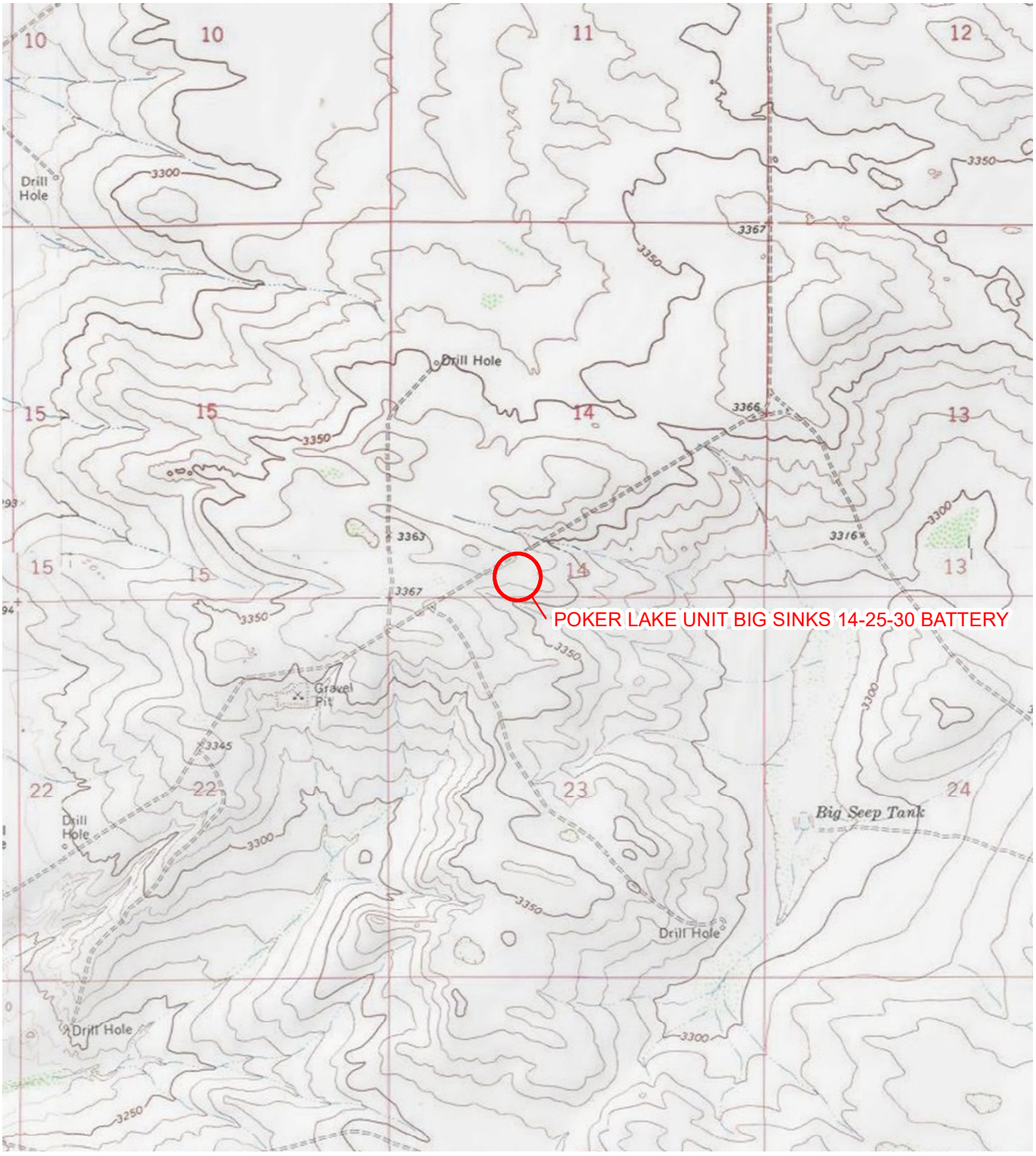

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5598

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT BIG SINKS 14-25-30 BATTERY
UNIT N SEC 14 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919186_PLU BIG SINKS 14-25-30 BATTERY\012919186_FIG01_SL_5598.mxd

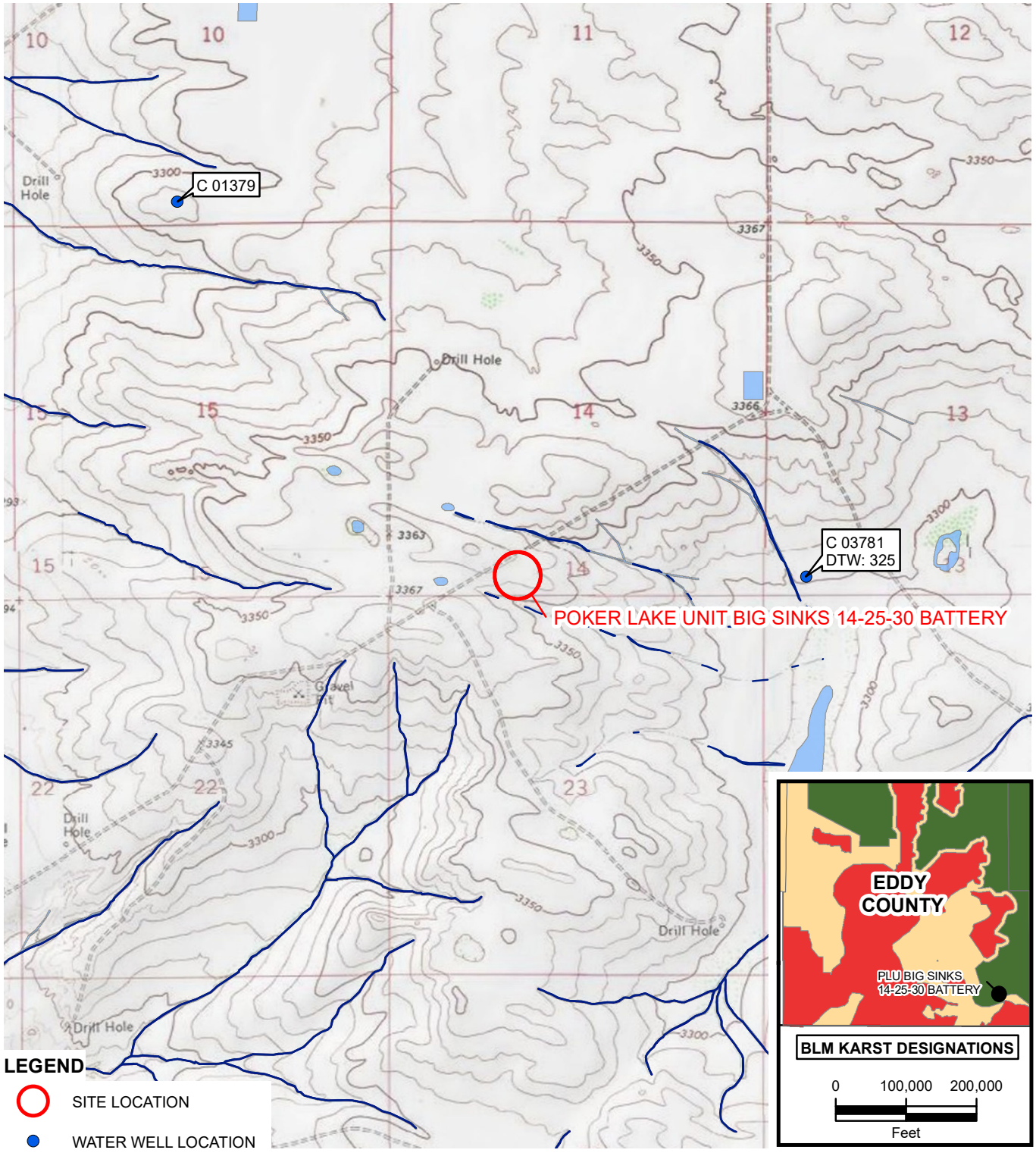

FIGURE 2
POTENTIAL RECEPTOR MAP
POKER LAKE UNIT BIG SINKS 14-25-30 BATTERY
UNIT N SEC 14 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919186_PLU BIG SINKS 14-25-30 BATTERY\012919186_FIG02_POTENTIAL RECEPTOR_5598.mxd

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5598

FIGURE 3
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT BIG SINKS 14-25-30 BATTERY
UNIT N SEC 14 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919186_PLU BIG SINKS 14-25-30 BATTERY\012919186_FIG03_PRELIMINARY_DSO_5598.mxd

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5598

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT BIG SINKS 14-25-30 BATTERY
UNIT N SEC 14 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919186_PLU BIG SINKS 14-25-30 BATTERY\012919186_FIG04_EXCAVATION_5598.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PLU BIG SINKS 14-25-30 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5598
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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	49.7	<25.0	49.7	49.7	23.5
SS02	0.5	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	39.9	2,460	220	**2,500**	**2,720**	<5.00
SS03	0.5	08/27/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	47.3	<24.9	47.3	47.3	24.2
FS01	1	10/23/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	55.5	67.4	55.5	123	37.4

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: PHOTOGRAPHIC LOG

Northern view of point of release and caliche well pad during site assessment activities.

Project: 012919186	XTO Energy, Inc. Poker Lake Unit Big Sinks 14-25-30 Battery	LTE Advancing Opportunity
September 23, 2019	Photographic Log	

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

Project: 012919186	XTO Energy, Inc. Poker Lake Unit Big Sinks 14-25-30 Battery	LTE Advancing Opportunity
October 23, 2019	Photographic Log	

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 635290

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU BS 14-25-30

04-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04-SEP-19

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

Reference: XENCO Report No(s): **635290**
PLU BS 14-25-30
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) 635290. 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. 635290 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

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

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

Sample Cross Reference 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08-27-19 11:45	0.5 ft	635290-001
SS02	S	08-27-19 11:55	0.5 ft	635290-002
SS03	S	08-27-19 12:00	0.5 ft	635290-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU BS 14-25-30

Project ID:
Work Order Number(s): *635290*

Report Date: *04-SEP-19*
Date Received: *08/27/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100362 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: 635299-001 SD.

Certificate of Analysis Summary 635290

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 14-25-30

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Aug-27-19 03:33 pm

Report Date: 04-SEP-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635290-001		635290-002		635290-003							
	Field Id:	SS01		SS02		SS03							
	Depth:	0.5- ft		0.5- ft		0.5- ft							
	Matrix:	SOIL		SOIL		SOIL							
	Sampled:	Aug-27-19 11:45		Aug-27-19 11:55		Aug-27-19 12:00							
BTEX by EPA 8021B	***Extracted:***	Aug-30-19 08:30		Aug-30-19 08:30		Aug-30-19 08:30							
SUB: T104704400-18-16	***Analyzed:***	Aug-31-19 05:31		Aug-31-19 05:51		Aug-31-19 06:12							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00401	0.00401						
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	Aug-29-19 15:15		Aug-29-19 15:15		Aug-29-19 15:15							
SUB: T104704400-18-16	***Analyzed:***	Aug-29-19 20:41		Aug-29-19 21:01		Aug-29-19 21:20							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		23.5	5.05	<5.00	5.00	24.2	4.98						
TPH by SW8015 Mod	***Extracted:***	Aug-29-19 13:00		Aug-29-19 13:00		Aug-29-19 13:00							
SUB: T104704400-18-16	***Analyzed:***	Aug-30-19 07:52		Aug-30-19 08:14		Aug-30-19 08:35							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	39.9	24.9	<24.9	24.9						
Diesel Range Organics (DRO)		49.7	25.0	2460	24.9	47.3	24.9						
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	220	24.9	<24.9	24.9						
Total TPH		49.7	25.0	2720	24.9	47.3	24.9						
Total GRO-DRO		49.7	25.0	2500	24.9	47.3	24.9						

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-001	Date Collected:	08.27.19 11.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.29.19 15.15	Basis:	Wet Weight
Seq Number:	3100140			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.5**	5.05	mg/kg	08.29.19 20.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 13.00	Basis:	Wet Weight
Seq Number:	3100195			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 07.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**49.7**	25.0	mg/kg	08.30.19 07.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 07.52	U	1
Total TPH	PHC635	**49.7**	25.0	mg/kg	08.30.19 07.52		1
Total GRO-DRO	PHC628	**49.7**	25.0	mg/kg	08.30.19 07.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.30.19 07.52	
o-Terphenyl	84-15-1	104	%	70-135	08.30.19 07.52	

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-001	Date Collected:	08.27.19 11.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 08.30	Basis:	Wet Weight
Seq Number:	3100362			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.31.19 05.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.31.19 05.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	08.31.19 05.31	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.31.19 05.31	

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-002	Date Collected:	08.27.19 11.55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.29.19 15.15	Basis:	Wet Weight
Seq Number:	3100140			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.29.19 21.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 13.00	Basis:	Wet Weight
Seq Number:	3100195			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**39.9**	24.9	mg/kg	08.30.19 08.14		1
Diesel Range Organics (DRO)	C10C28DRO	**2460**	24.9	mg/kg	08.30.19 08.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**220**	24.9	mg/kg	08.30.19 08.14		1
Total TPH	PHC635	**2720**	24.9	mg/kg	08.30.19 08.14		1
Total GRO-DRO	PHC628	**2500**	24.9	mg/kg	08.30.19 08.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.30.19 08.14	
o-Terphenyl	84-15-1	110	%	70-135	08.30.19 08.14	

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-002	Date Collected:	08.27.19 11.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 08.30	Basis:	Wet Weight
Seq Number:	3100362			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.31.19 05.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.31.19 05.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.31.19 05.51	
4-Bromofluorobenzene	460-00-4	130	%	70-130	08.31.19 05.51	

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-003	Date Collected:	08.27.19 12.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.29.19 15.15	Basis:	Wet Weight
Seq Number:	3100140			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.2**	4.98	mg/kg	08.29.19 21.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 13.00	Basis:	Wet Weight
Seq Number:	3100195			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.30.19 08.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**47.3**	24.9	mg/kg	08.30.19 08.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.30.19 08.35	U	1
Total TPH	PHC635	**47.3**	24.9	mg/kg	08.30.19 08.35		1
Total GRO-DRO	PHC628	**47.3**	24.9	mg/kg	08.30.19 08.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.30.19 08.35	
o-Terphenyl	84-15-1	102	%	70-135	08.30.19 08.35	

Certificate of Analytical Results 635290

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.27.19 15.33
Lab Sample Id:	635290-003	Date Collected:	08.27.19 12.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 08.30	Basis:	Wet Weight
Seq Number:	3100362			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.31.19 06.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.31.19 06.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	08.31.19 06.12	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.31.19 06.12	

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 635290

LT Environmental, Inc.

PLU BS 14-25-30

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100140 — Matrix: Solid — Date Prep: 08.29.19
MB Sample Id: 7685294-1-BLK — LCS Sample Id: 7685294-1-BKS — LCSD Sample Id: 7685294-1-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	262	105	261	104	90-110	0	20	mg/kg	08.29.19 18:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100140 — Matrix: Soil — Date Prep: 08.29.19
Parent Sample Id: 635290-001 — MS Sample Id: 635290-001 S — MSD Sample Id: 635290-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.5	253	292	106	295	107	90-110	1	20	mg/kg	08.29.19 20:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100140 — Matrix: Soil — Date Prep: 08.29.19
Parent Sample Id: 635467-037 — MS Sample Id: 635467-037 S — MSD Sample Id: 635467-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.29	248	265	106	261	105	90-110	2	20	mg/kg	08.29.19 19:11	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3100195 — Matrix: Solid — Date Prep: 08.29.19
MB Sample Id: 7685284-1-BLK — LCS Sample Id: 7685284-1-BKS — LCSD Sample Id: 7685284-1-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	909	91	1080	108	70-135	17	20	mg/kg	08.29.19 23:54	
Diesel Range Organics (DRO)	<25.0	1000	928	93	1070	107	70-135	14	20	mg/kg	08.29.19 23:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		101		128		70-135	%	08.29.19 23:54
o-Terphenyl	109		101		121		70-135	%	08.29.19 23:54

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

QC Summary 635290

LT Environmental, Inc.

PLU BS 14-25-30

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3100195 | Matrix: Soil | Date Prep: 08.29.19
Parent Sample Id: 635299-001 | MS Sample Id: 635299-001 S | MSD Sample Id: 635299-001 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)	<15.0	999	965	97	873	88	70-135	10	20	mg/kg	08.30.19 00:59	
Diesel Range Organics (DRO)	35.0	999	984	95	877	84	70-135	11	20	mg/kg	08.30.19 00:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		94		70-135	%	08.30.19 00:59
o-Terphenyl	104		91		70-135	%	08.30.19 00:59

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100362 | Matrix: Solid | Date Prep: 08.30.19
MB Sample Id: 7685345-1-BLK | LCS Sample Id: 7685345-1-BKS | LCSD Sample Id: 7685345-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.100	100	70-130	8	35	mg/kg	08.31.19 08:48	
Toluene	<0.00200	0.100	0.104	104	0.0960	96	70-130	8	35	mg/kg	08.31.19 08:48	
Ethylbenzene	<0.00200	0.100	0.121	121	0.110	110	70-130	10	35	mg/kg	08.31.19 08:48	
m,p-Xylenes	<0.00400	0.200	0.246	123	0.228	114	70-130	8	35	mg/kg	08.31.19 08:48	
o-Xylene	<0.00200	0.100	0.117	117	0.112	112	70-130	4	35	mg/kg	08.31.19 08:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		96		99		70-130	%	08.31.19 08:48
4-Bromofluorobenzene	109		117		124		70-130	%	08.31.19 08:48

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100362 | Matrix: Soil | Date Prep: 08.30.19
Parent Sample Id: 635299-001 | MS Sample Id: 635299-001 S | MSD Sample Id: 635299-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0853	86	0.0898	91	70-130	5	35	mg/kg	08.31.19 09:29	
Toluene	<0.00199	0.0996	0.0801	80	0.0886	89	70-130	10	35	mg/kg	08.31.19 09:29	
Ethylbenzene	<0.00199	0.0996	0.0930	93	0.101	102	70-130	8	35	mg/kg	08.31.19 09:29	
m,p-Xylenes	<0.00398	0.199	0.189	95	0.205	104	70-130	8	35	mg/kg	08.31.19 09:29	
o-Xylene	<0.00199	0.0996	0.0918	92	0.0991	100	70-130	8	35	mg/kg	08.31.19 09:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	08.31.19 09:29
4-Bromofluorobenzene	130		134	**	70-130	%	08.31.19 09:29

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

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

Work Order No: U35290

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; dmoir@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:	PLUBS 14-25-30	Turn Around	
Project Number:		Routine	☑
P.O. Number:	07/29/2019	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0	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:	3

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	08/27/19	1145	.5'	1	X	X	X
SS02	↓	↓	1155	↓	1	↓	↓	↓
SS03	↓	↓	1200	↓	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
		8/27/19 15:33	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **47030**

Date/Time: 08/28/19 09:26
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.: 776104978254
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
635290-001	S	SS01	08/27/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	09/03/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635290-001	S	SS01	08/27/19 11:45	E300_CL	Chloride by EPA 300	09/03/19	02/23/20	JKR	CL	
635290-001	S	SS01	08/27/19 11:45	SW8021B	BTEX by EPA 8021B	09/03/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635290-002	S	SS02	08/27/19 11:55	SW8015MOD_NM	TPH by SW8015 Mod	09/03/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635290-002	S	SS02	08/27/19 11:55	E300_CL	Chloride by EPA 300	09/03/19	02/23/20	JKR	CL	
635290-002	S	SS02	08/27/19 11:55	SW8021B	BTEX by EPA 8021B	09/03/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635290-003	S	SS03	08/27/19 12:00	E300_CL	Chloride by EPA 300	09/03/19	02/23/20	JKR	CL	
635290-003	S	SS03	08/27/19 12:00	SW8015MOD_NM	TPH by SW8015 Mod	09/03/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635290-003	S	SS03	08/27/19 12:00	SW8021B	BTEX by EPA 8021B	09/03/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/28/2019

Received By: Brianna Teel

Date Received: 08/29/2019 11:46

Cooler Temperature: 0.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47030

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

Sent By: Elizabeth McClellan **Date Sent:** 08/28/2019 09:26 AM

Received By: Brianna Teel **Date Received:** 08/29/2019 11:46 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.3	
#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: Brianna Teel Date: 08/29/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/27/2019 03:33:00 PM

Work Order #: 635290

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	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**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: Elizabeth McClellan Date: 08/28/2019

Checklist reviewed by: Jessica Kramer Date: 08/28/2019

Jessica Kramer

Analytical Report 640921

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU BS 14-25-30

012919186

28-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)

28-OCT-19

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

Reference: XENCO Report No(s): **640921**
PLU BS 14-25-30
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) 640921. 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. 640921 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

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

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

Sample Cross Reference 640921

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	10-23-19 17:30	1 ft	640921-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU BS 14-25-30

Project ID: *012919186*
Work Order Number(s): *640921*

Report Date: *28-OCT-19*
Date Received: *10/24/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105486 BTEX by EPA 8021B

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

Certificate of Analysis Summary 640921

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 14-25-30

Project Id: 012919186
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Oct-24-19 08:51 am
Report Date: 28-OCT-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	640921-001					
	Field Id:	FS01					
	Depth:	1- ft					
	Matrix:	SOIL					
	Sampled:	Oct-23-19 17:30					
BTEX by EPA 8021B	***Extracted:***	Oct-24-19 11:10					
	Analyzed:	Oct-24-19 18:46					
	Units/RL:	mg/kg	RL				
Benzene		<0.00100	0.00100				
Toluene		<0.00100	0.00100				
Ethylbenzene		<0.00100	0.00100				
m,p-Xylenes		<0.00200	0.00200				
o-Xylene		<0.00100	0.00100				
Total Xylenes		<0.00100	0.00100				
Total BTEX		<0.00100	0.00100				
Chloride by EPA 300	***Extracted:***	Oct-24-19 11:10					
	Analyzed:	Oct-24-19 14:48					
	Units/RL:	mg/kg	RL				
Chloride		37.4	10.0				
TPH by SW8015 Mod	***Extracted:***	Oct-24-19 16:00					
	Analyzed:	Oct-24-19 21:04					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		55.5	50.1				
Motor Oil Range Hydrocarbons (MRO)		67.4	50.1				
Total GRO-DRO		55.5	50.1				
Total TPH		123	50.1				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 640921

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	10.24.19 08.51
Lab Sample Id:	640921-001	Date Collected:	10.23.19 17.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.24.19 11.10	Basis:	Wet Weight
Seq Number:	3105357				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.4**	10.0	mg/kg	10.24.19 14.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.24.19 16.00	Basis:	Wet Weight
Seq Number:	3105475				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.24.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**55.5**	50.1	mg/kg	10.24.19 21.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**67.4**	50.1	mg/kg	10.24.19 21.04		1
Total GRO-DRO	PHC628	**55.5**	50.1	mg/kg	10.24.19 21.04		1
Total TPH	PHC635	**123**	50.1	mg/kg	10.24.19 21.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.24.19 21.04	
o-Terphenyl	84-15-1	92	%	70-135	10.24.19 21.04	

Certificate of Analytical Results 640921

LT Environmental, Inc., Arvada, CO

PLU BS 14-25-30

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	10.24.19 08.51
Lab Sample Id:	640921-001	Date Collected:	10.23.19 17.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.24.19 11.10	Basis:	Wet Weight
Seq Number:	3105486				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.24.19 18.46	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1
Total BTEX		<0.00100	0.00100	mg/kg	10.24.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.24.19 18.46	
4-Bromofluorobenzene	460-00-4	122	%	70-130	10.24.19 18.46	

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 640921

LT Environmental, Inc.

PLU BS 14-25-30

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3105357 Matrix: Solid Date Prep: 10.24.19
MB Sample Id: 7688782-1-BLK LCS Sample Id: 7688782-1-BKS LCSD Sample Id: 7688782-1-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	275	110	273	109	90-110	1	20	mg/kg	10.24.19 13:05	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3105357 Matrix: Soil Date Prep: 10.24.19
Parent Sample Id: 640920-001 MS Sample Id: 640920-001 S MSD Sample Id: 640920-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.4	200	234	107	235	108	90-110	0	20	mg/kg	10.24.19 13:39	

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3105475 Matrix: Solid Date Prep: 10.24.19
MB Sample Id: 7688914-1-BLK LCS Sample Id: 7688914-1-BKS LCSD Sample Id: 7688914-1-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	871	87	822	82	70-135	6	35	mg/kg	10.24.19 19:06	
Diesel Range Organics (DRO)	31.3	1000	744	74	824	82	70-135	10	35	mg/kg	10.24.19 19:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		105		101		70-135	%	10.24.19 19:06
o-Terphenyl	88		97		93		70-135	%	10.24.19 19:06

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3105475 Matrix: Solid Date Prep: 10.24.19
MB Sample Id: 7688914-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.24.19 18:47	

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 640921

LT Environmental, Inc.

PLU BS 14-25-30

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3105475 — Matrix: Soil — Date Prep: 10.24.19
Parent Sample Id: 640920-002 — MS Sample Id: 640920-002 S — MSD Sample Id: 640920-002 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)	<50.2	1000	822	82	844	85	70-135	3	35	mg/kg	10.24.19 19:26	
Diesel Range Organics (DRO)	44.8	1000	819	77	901	86	70-135	10	35	mg/kg	10.24.19 19:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		108		70-135	%	10.24.19 19:26
o-Terphenyl	103		103		70-135	%	10.24.19 19:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3105486 — Matrix: Solid — Date Prep: 10.24.19
MB Sample Id: 7688834-1-BLK — LCS Sample Id: 7688834-1-BKS — LCSD Sample Id: 7688834-1-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	0.0964	96	0.0984	98	70-130	2	35	mg/kg	10.24.19 12:41	
Toluene	<0.00100	0.100	0.0970	97	0.0996	100	70-130	3	35	mg/kg	10.24.19 12:41	
Ethylbenzene	<0.00100	0.100	0.0960	96	0.0997	100	71-129	4	35	mg/kg	10.24.19 12:41	
m,p-Xylenes	<0.00200	0.200	0.205	103	0.215	108	70-135	5	35	mg/kg	10.24.19 12:41	
o-Xylene	<0.00100	0.100	0.103	103	0.108	108	71-133	5	35	mg/kg	10.24.19 12:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		103		70-130	%	10.24.19 12:41
4-Bromofluorobenzene	110		115		115		70-130	%	10.24.19 12:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3105486 — Matrix: Solid — Date Prep: 10.24.19
Parent Sample Id: 640920-002 — MS Sample Id: 640920-002 S — MSD Sample Id: 640920-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000988	0.0988	0.0741	75	0.0927	94	70-130	22	35	mg/kg	10.24.19 13:19	
Toluene	<0.000988	0.0988	0.0805	81	0.0912	93	70-130	12	35	mg/kg	10.24.19 13:19	
Ethylbenzene	0.0103	0.0988	0.0810	72	0.0884	80	71-129	9	35	mg/kg	10.24.19 13:19	
m,p-Xylenes	0.00899	0.198	0.178	85	0.191	93	70-135	7	35	mg/kg	10.24.19 13:19	
o-Xylene	<0.000988	0.0988	0.0891	90	0.0974	99	71-133	9	35	mg/kg	10.24.19 13:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		105		70-130	%	10.24.19 13:19
4-Bromofluorobenzene	125		119		70-130	%	10.24.19 13:19

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

Chain of Custody

Work Order No: 640921

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 Crasibad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc.	Company Name:	XTO Energy
Address:	508 W. Stevens St.	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	Email:		

Work Order Comments

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

Project Name:	PLU BS 14-25-30 (2RP-5598)	Turn Around	
Project Number:	012919186	Routine ☐	
Project Location		Rush: 24 hr	
Sampler's Name:	Kalei Jennings	Due Date: 10-25-19	
PO #:	Quote #:		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1.1c	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:	1

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	BTEX (EPA8021B)	TPH (SW 8015 Mod)	Chloride (E300)	Sample Comments
	FS01	S	10-23-19	17:30	1'	1	X	X	X	

NFE

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Kalei Jennings		10/24/19 851	2		
3			4		
5			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/24/2019 08:51:00 AM

Work Order #: 640921

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)?	1.6
#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: 10/24/2019

Checklist reviewed by: Jessica Kramer Date: 10/24/2019

Jessica Kramer