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

May 10, 2019

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

RE: Closure Request
Poker Lake Unit Pierce Canyon 17 Federal 1H Battery
Remediation Permit Number 2RP-4656
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling activities at the Poker Lake Unit Pierce Canyon 17 Federal 1H Battery (Site) in Unit P, Section 17, Township 25 South, Range 30 East, Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to assess impacts to soil after 11 barrels (bbls) of produced water were released at the Site.

On February 21, 2018, a corroded connection of pipe caused produced water to leak into the tank battery secondary containment and a portion of the pad surface to the southwest of the tank battery. XTO used a vacuum truck to recover approximately 11 bbls of the released fluids. The failed section of pipe was replaced and the facility was returned to operation. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on March 8, 2018, and was assigned Remediation Permit (RP) Number 2RP-4656 (Attachment 1).

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier III site in the Compliance Agreement, meaning evaluation of the release and remediation planning began prior to August 14, 2018, the effective date of 19.15.29 NMAC, but had not yet been initiated. Based on subsequent remediation activities conducted and results of the soil sampling events described in this report, XTO is requesting deferral of final remediation.

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is USGS.320629103533002.19490310.19921106, located approximately 1.13 miles south of the Site, with a depth to groundwater of 264 feet bgs and a total depth of 280 feet bgs. The nearest continuously flowing water or significant watercourse is an unnamed dry wash located approximately 0.63 miles 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 in a low potential karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

SOIL SAMPLING

On March 22, 2018, an LTE scientist collected four preliminary soil samples (SS01 through SS04) within the release area to assess the lateral extent of soil impacts. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. The soil samples were collected from each sample location at approximately 1.0 feet to 1.5 feet bgs. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico or Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were in compliance with the NMOCD Table 1 closure criteria, but exceed 600 mg/kg. Soil above the soil samples was scheduled for excavation. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2.

EXCAVATION

From April 26 to April 30, 2019, LTE personnel returned to the Site oversee excavation activities as indicated by field screening activities and visual staining in the documented release area. To delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04 were collected from the floor of the excavation at a depth of 2 feet bgs. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavation from a depth of 0 feet to 2 feet bgs. Samples were prepared, handled, and analyzed by Xenco as previously described. Soil sample locations are illustrated on Figure 3.

Soil sampling results indicated sidewall sample SW01 contained chloride in excess of 600 mg/kg. Additional excavation could not be completed on the north wall due to the proximity of active process equipment and pipelines. The excavation measured approximately 1,043 square feet with a depth of 2 feet bgs. The horizontal extent of the excavation is illustrated on Figure 3. Approximately 110 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Disposal Facility located in Carlsbad, New Mexico.

DELINEATION ACTIVITIES

On May 6, 2019, LTE personnel returned to the site to conduct confirmation delineation soil sampling. Using a hand auger, three boreholes (BH01 through BH03) were advanced north of the excavation, to investigate potential elevated chloride concentrations based on the laboratory analytical results for the north wall excavation confirmation sample (SW02). Soil was field screened in each borehole using a PID and Hach® chloride QuanTab® test strips. Two soil samples from each borehole were submitted from depths of 0.5 feet and 2 feet bgs. The borehole locations and soil sample depths are presented on Figure 3. Soil sampling logs are included as Attachment 2. Samples were prepared, handled, and analyzed by Xenco as previously described.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS04. However, chloride concentrations in preliminary soil samples exceeded 600 mg/kg, which prompted excavation of soil on the federally owned land.

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in excavation soil samples, but soil sample SW01 contained 712 mg/kg of chloride, exceeding 600 mg/kg in the top 4 feet.

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all borehole soil samples. Additionally, laboratory analytical results indicated that chloride concentrations were below 600 mg/kg in all borehole soil samples. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Although all samples collected were compliant with NMOCD Table 1 Closure Criteria, XTO removed a total of 110 cubic yards of soil containing chloride concentrations exceeding 600 mg/kg from the release footprint. One sample, excavation sidewall confirmation sample SW01, contained 712 mg/kg, but additional soil removal was prevented by the presence of active pipelines and equipment. Soil north of the excavation was investigated with boreholes and chloride concentrations in samples collected from 0.5 and 2 feet bgs in each borehole did not exceed 600 mg/kg. Because all samples are in compliance with NMOCD Table 1 Closure Criteria and because delineation samples indicate soil exceeding 600 mg/kg is restricted to the area immediately around the active pipeline and equipment, which cannot be removed at this time, XTO requests no further action for this release. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

Ashley L. Ager

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTOEnergy, Inc.
Michael Bratcher, NMOCD
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
JimAmos,U.S. Bureau of Land Management
Crystal Weaver,U.S. Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation and Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5246)
Attachment 2	Soil Sampling Logs
Attachment 3	Laboratory Analytical Reports
Attachment 4	Photographic Log

FIGURES

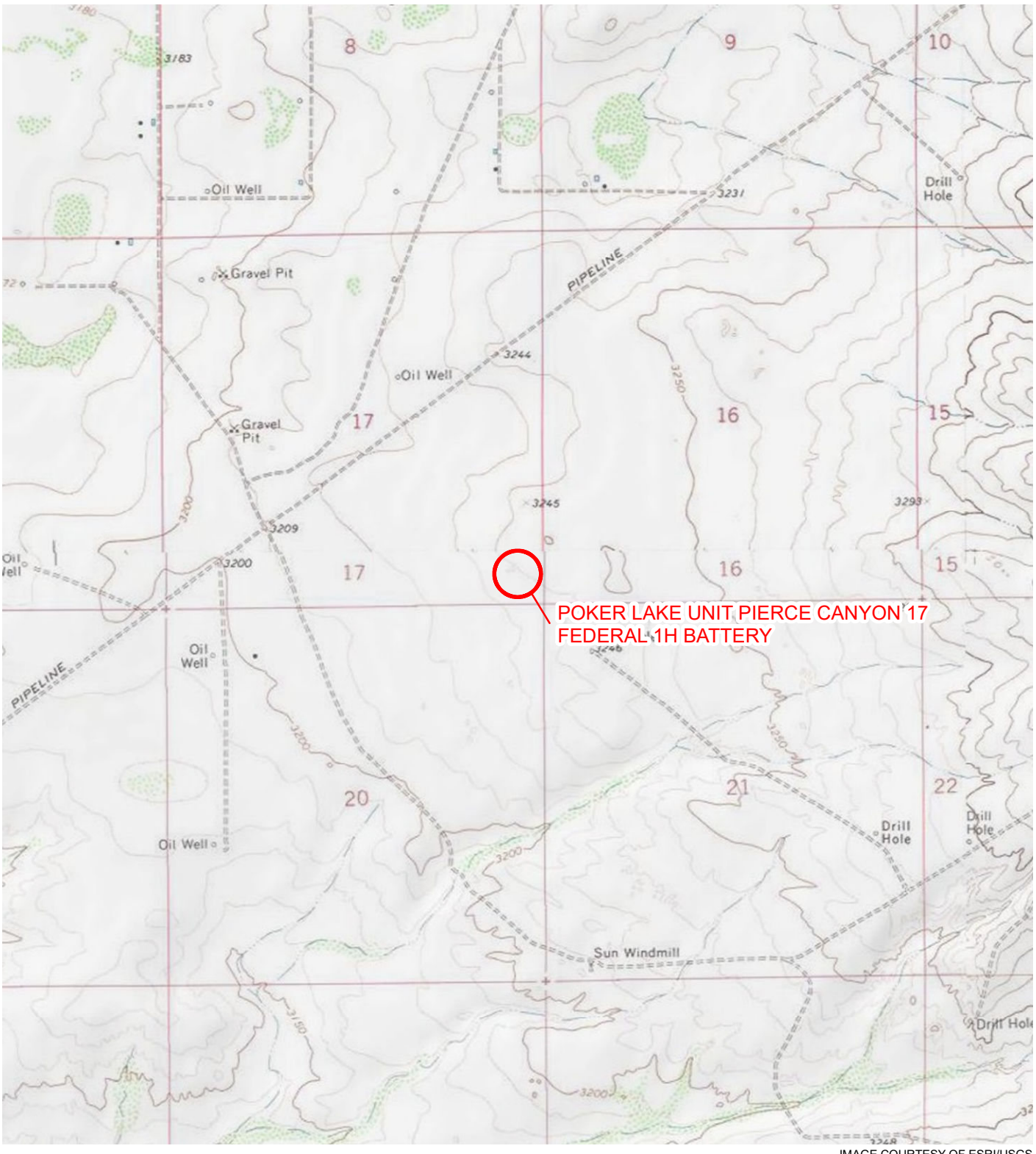

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-4656

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT PIERCE CANYON 17
FEDERAL 1H BATTERY
UNIT P SEC 17 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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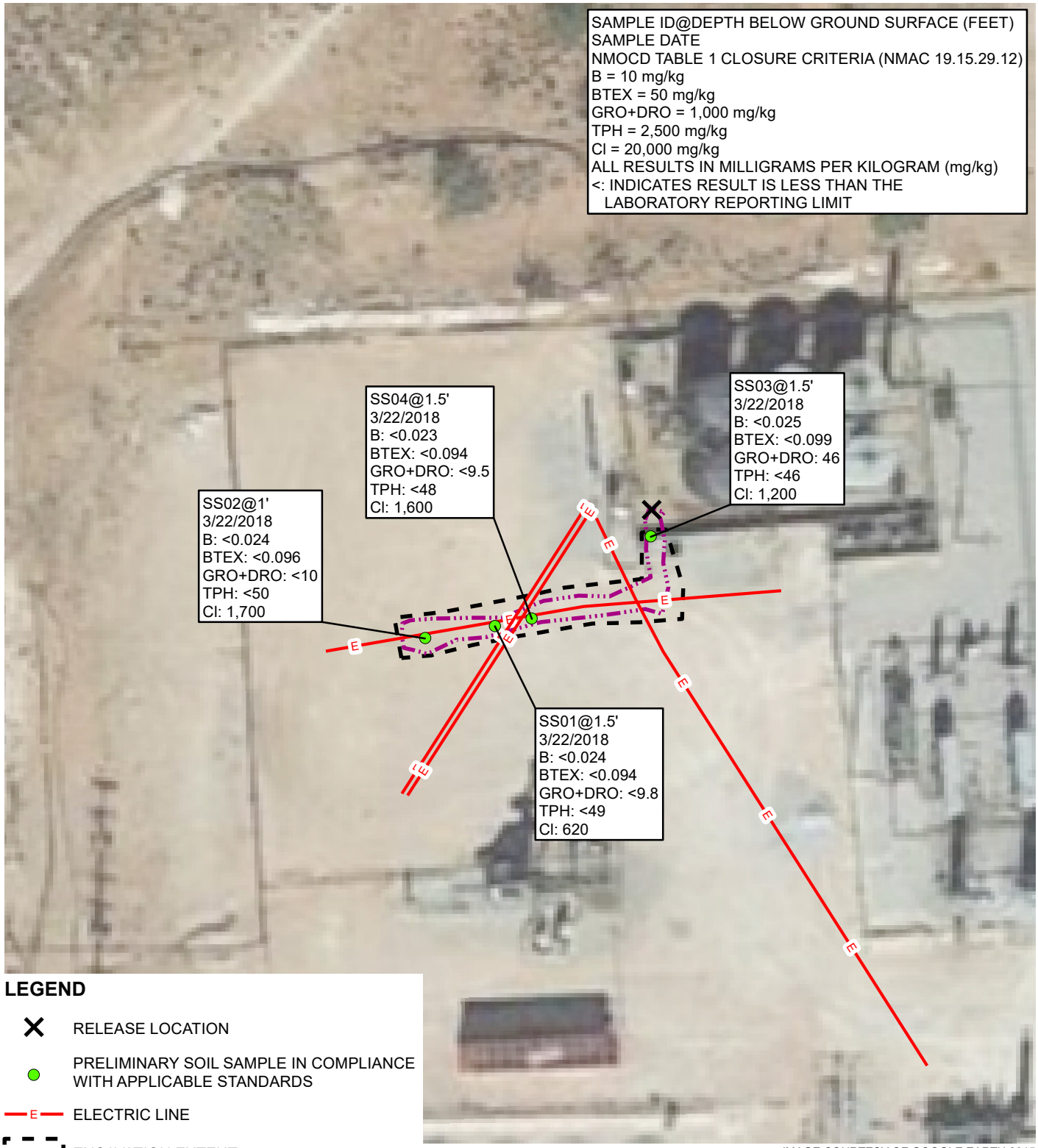

LEGEND

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

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-4656

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT PIERCE CANYON 17 FEDERAL 1H BATTERY
UNIT P SEC 17 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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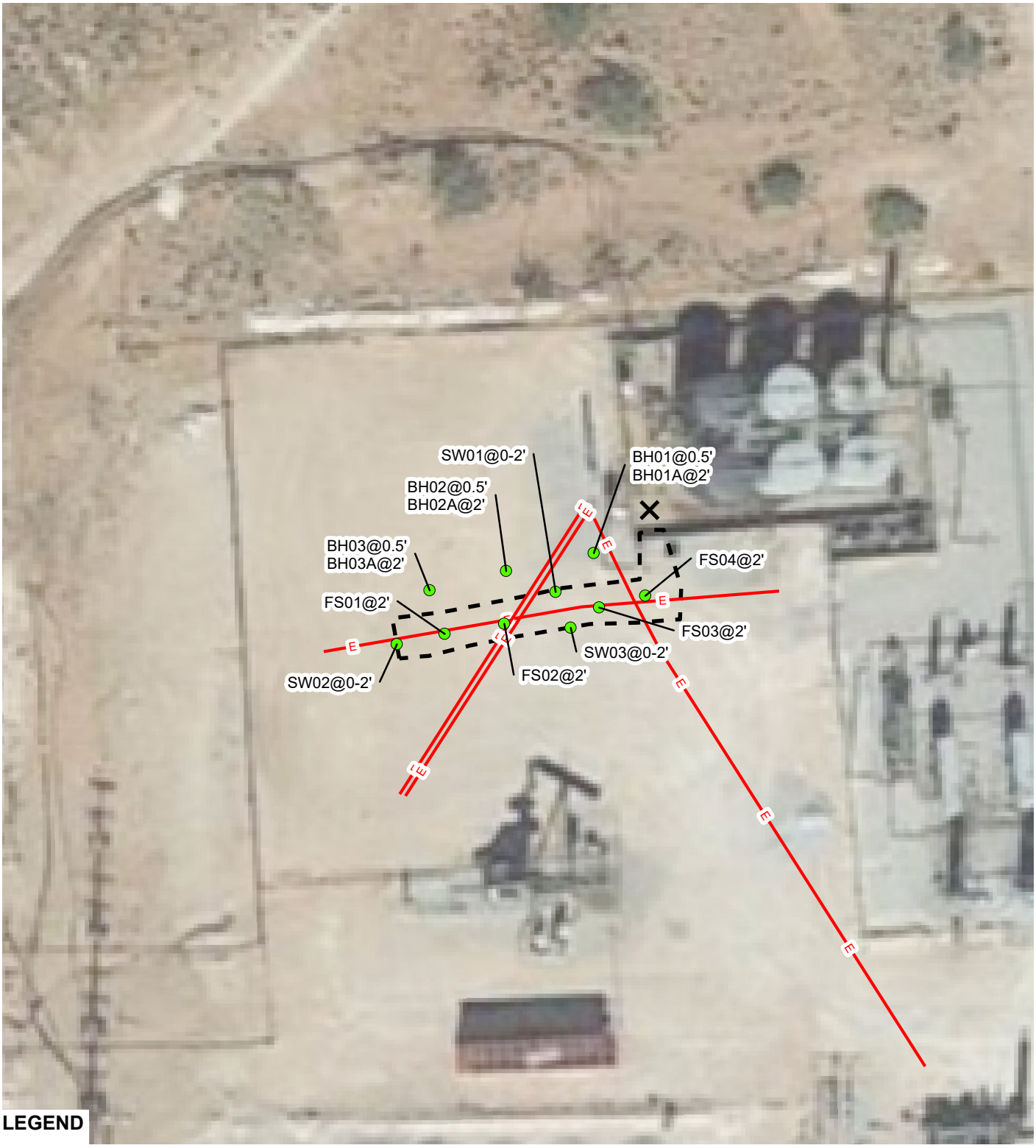

FIGURE 3
DELINEATION AND EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT PIERCE CANYON 17
FEDERAL 1H BATTERY
UNIT P SEC 17 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT PIERCE CANYON 17 FEDERAL 1H BATTERY
REMEDIATION PERMIT NUMBERS 2RP-4656
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)	MRO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	1.5	03/22/2018	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.8	<49	<9.8	<49	620
SS02	1	03/22/2018	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<10	<50	<10	<50	1,700
SS03	1.5	03/22/2018	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	46.0	<46	46	46.0	1,200
SS04	1.5	03/22/2018	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.5	<48	<9.5	<48	1,600
FS01	2	04/30/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	189
FS02	2	04/30/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	374
FS03	2	04/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	563
FS04	2	04/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	563
SW01	0 - 2	04/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	17.8	<14.9	17.8	17.8	712
SW02	0 - 2	04/30/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	44.1	<15.0	44.1	44.1	408
SW03	0 - 2	04/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	478
BH01	0.5	05/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	15.9	<15.0	15.9	15.9	146
BH01A	2	05/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.9
BH02	0.5	05/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	35.8	<15.0	35.8	35.8	196
BH02A	2	05/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	209
BH03	0.5	05/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	34.2	<15.0	34.2	34.2	183
BH03A	2	05/06/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	223
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4656)

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4656
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.124273 Longitude -103.895836
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Pierce Canyon 17 Federal 1H Battery	Site Type Exploration and Production
Date Release Discovered 2/21/2018	API# *(if applicable)* 30-015-36635 (PLU CVX JV PC #001H)

Unit Letter	Section	Township	Range	County
P	17	25S	30E	Eddy

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

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) 11 bbls	Volume Recovered (bbls) 10 bbls
	Is the concentration of dissolved chloride 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
Connection leaked on a line flowing into water tank due to corrosion. Parts were replaced and facility was RTP.

Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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 Coordinator

Signature: Date: 5-10-19

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

OCD Only

Received by: Date:

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 5-10-19

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

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 5-10-19

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: SOIL SMAPLING LOGS

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

Identifier:	Date:
BH01	5/6/19
Project Name:	RP Number:
Pierce Canyon 17	2RP-4656
Logged By: Ben Belill	Method: Hand Auger
Hole Diameter: 3.25"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.124200, -103.845924

Field Screening: Chlorides, TPH, BTEX, GRO, MRO & DRO.

Comments: All chloride tests include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.6	N	BH01	0	0.5'	CALICHE	CALICHE, dry, light brown - tan, poorly consolidated, fill, no odor.
					1		SC	Clayey SAND, moist, brown - red, poorly graded, ~~coarse~~ well consolidated tan caliche, no odor.
M	<112	2.4	N	BH01A	2	2'		
					3			EOB @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH02	5/6/19
Project Name:	**RP Number:**
Pierce Canyon 17	2RP-4656
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Ben Belill / Method: Hand Auger
Lat/Long: 32.124187, -103.896004 / Field Screening: Chlorides, TPH, BTEX, GRO, DRO & ORO	Hole Diameter: 3.25" / Total Depth: 2'

Comments: All chloride tests include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.4	N	BH02	0	0.5'	CALICHE	CALICHE, dry, light brown-tan, poorly consolidated, no odor, fill.
M	<112	0.9	N	BH02A	1	2'	SC	Clayey SAND, moist, brown-red, poorly graded, some well consolidated tan caliche, no odor.
					2			EOB @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH03	5/6/19
Project Name:	**RP Number:**
Pierce Canyon 17	2RP-4656
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Ben Belill / Method: Hand Auger
Lat/Long: 32.124172, -103.896074	Field Screening: Chlorides, TPH, BTEX, GRO, MRO, DRO / Hole Diameter: 3.25" / Total Depth: 2'

Comments: All chloride tests include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.6	N	BH03	0	0.5'	CALICHE	CALICHE, dry, light brown-tan, poorly consolidated, fill, no odor.
M	<112	1.0	N	BH03A	1	2'	SC	clayey SAND, moist, brown-red, poorly graded, some well consolidated tan caliche, no odor
					2			EOB @ 2'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 04, 2018

Adrian Baker
XTO Midland
6401 Holiday Hill Rd #200
Midland, TX 79707
TEL: (432) 894-5641
FAX

RE: PLU PC Fed 17 1H_2RP-NA OrderNo.: 1803E13

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803E13**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS01 @ 1.5'
Project: PLU PC Fed 17 1H_2RP-NA **Collection Date:** 3/22/2018 11:30:00 AM
Lab ID: 1803E13-001 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/29/2018 8:13:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/29/2018 8:13:20 PM
Surr: DNOP	70.4	70-130		%Rec	1	3/29/2018 8:13:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/28/2018 11:32:46 PM
Surr: BFB	92.4	15-316		%Rec	1	3/28/2018 11:32:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	3/28/2018 11:32:46 PM
Toluene	ND	0.047		mg/Kg	1	3/28/2018 11:32:46 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/28/2018 11:32:46 PM
Xylenes, Total	ND	0.094		mg/Kg	1	3/28/2018 11:32:46 PM
Surr: 4-Bromofluorobenzene	86.4	80-120		%Rec	1	3/28/2018 11:32:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	620	30		mg/Kg	20	4/3/2018 11:55:40 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1803E13**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS02 @ 1'
Project: PLU PC Fed 17 1H_2RP-NA **Collection Date:** 3/22/2018 12:00:00 PM
Lab ID: 1803E13-002 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/29/2018 8:35:40 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/29/2018 8:35:40 PM
Surr: DNOP	70.2	70-130		%Rec	1	3/29/2018 8:35:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/28/2018 11:56:13 PM
Surr: BFB	92.5	15-316		%Rec	1	3/28/2018 11:56:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	3/28/2018 11:56:13 PM
Toluene	ND	0.048		mg/Kg	1	3/28/2018 11:56:13 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/28/2018 11:56:13 PM
Xylenes, Total	ND	0.096		mg/Kg	1	3/28/2018 11:56:13 PM
Surr: 4-Bromofluorobenzene	85.8	80-120		%Rec	1	3/28/2018 11:56:13 PM
EPA METHOD 300.0: ANIONS						Analyst: **CJS**
Chloride	1700	75		mg/Kg	50	4/4/2018 1:04:14 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1803E13**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS03 @ 1.5'
Project: PLU PC Fed 17 1H_2RP-NA **Collection Date:** 3/22/2018 1:15:00 PM
Lab ID: 1803E13-003 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	46	9.2		mg/Kg	1	3/29/2018 8:57:43 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/29/2018 8:57:43 PM
Surr: DNOP	85.7	70-130		%Rec	1	3/29/2018 8:57:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/29/2018 12:19:42 AM
Surr: BFB	90.3	15-316		%Rec	1	3/29/2018 12:19:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	3/29/2018 12:19:42 AM
Toluene	ND	0.050		mg/Kg	1	3/29/2018 12:19:42 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/29/2018 12:19:42 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/29/2018 12:19:42 AM
Surr: 4-Bromofluorobenzene	84.5	80-120		%Rec	1	3/29/2018 12:19:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	1200	75		mg/Kg	50	4/3/2018 3:01:50 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1803E13**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS04 @ 1.5'
Project: PLU PC Fed 17 1H_2RP-NA **Collection Date:** 3/22/2018 2:00:00 PM
Lab ID: 1803E13-004 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/29/2018 9:19:50 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/29/2018 9:19:50 PM
Surr: DNOP	81.1	70-130		%Rec	1	3/29/2018 9:19:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/29/2018 12:43:04 AM
Surr: BFB	91.4	15-316		%Rec	1	3/29/2018 12:43:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.023		mg/Kg	1	3/29/2018 12:43:04 AM
Toluene	ND	0.047		mg/Kg	1	3/29/2018 12:43:04 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/29/2018 12:43:04 AM
Xylenes, Total	ND	0.094		mg/Kg	1	3/29/2018 12:43:04 AM
Surr: 4-Bromofluorobenzene	87.1	80-120		%Rec	1	3/29/2018 12:43:04 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	1600	75		mg/Kg	50	4/3/2018 3:14:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E13**
04-Apr-18

Client: XTO Midland
Project: PLU PC Fed 17 1H_2RP-NA

Sample ID	**MB-37382**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37382**	RunNo:	**50253**					
Prep Date:	**4/2/2018**	Analysis Date:	**4/2/2018**	SeqNo:	**1628264**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37382**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37382**	RunNo:	**50253**					
Prep Date:	**4/2/2018**	Analysis Date:	**4/2/2018**	SeqNo:	**1628265**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E13**
04-Apr-18

Client: XTO Midland
Project: PLU PC Fed 17 1H_2RP-NA

Sample ID	**MB-37282**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**37282**	RunNo:	**50178**					
Prep Date:	**3/28/2018**	Analysis Date:	**3/29/2018**	SeqNo:	**1625706**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		104	70	130			

Sample ID	**LCS-37282**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**37282**	RunNo:	**50178**					
Prep Date:	**3/28/2018**	Analysis Date:	**3/29/2018**	SeqNo:	**1625708**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	4.5		5.000		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E13**

04-Apr-18

Client: XTO Midland

Project: PLU PC Fed 17 1H_2RP-NA

Sample ID	**MB-37267**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**37267**	RunNo:	**50162**					
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**	SeqNo:	**1624553**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.6	15	316			

Sample ID	**LCS-37267**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**37267**	RunNo:	**50162**					
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**	SeqNo:	**1624554**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	75.9	131			
Surr: BFB	1000		1000		105	15	316			

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**G50163**	RunNo:	**50163**					
Prep Date:		Analysis Date:	**3/28/2018**	SeqNo:	**1624630**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		90.8	15	316			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**G50163**	RunNo:	**50163**					
Prep Date:		Analysis Date:	**3/28/2018**	SeqNo:	**1624631**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E13**

04-Apr-18

Client: XTO Midland

Project: PLU PC Fed 17 1H_2RP-NA

Sample ID	**MB-37267**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**37267**	RunNo:	**50162**					
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**	SeqNo:	**1624591**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.86		1.000		86.4	80	120			

Sample ID	**LCS-37267**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**37267**	RunNo:	**50162**					
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**	SeqNo:	**1624592**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.2	77.3	128			
Toluene	0.98	0.050	1.000	0	98.4	79.2	125			
Ethylbenzene	0.98	0.050	1.000	0	97.6	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	101	81.6	129			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: XTO MIDLAND Work Order Number: 1803E13 RcptNo: 1

Received By: **Mandy Woods** 3/27/2018 9:30:00 AM

Completed By: **Michelle Garcia** 3/27/2018 11:27:05 AM Michelle Garcia

Reviewed By: DDS 3/27/18 MW 3/27/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

Client: XTO Energy, Delware division	☑ Standard ☐ Rush	HALL ENVIRONMENTAL ANALYSIS LABORATORY	
Kyle Litterll	Project Name: PLU PC Fed 17 1H_2RP - NA	www.hallenvironmental.com	
Mailing Addre: 3300 N. A. Street Suite 103 Midland, Texas 79705		4901 Hawkins NE - Albuquerque, NM 87109	
	Project #:	Tel. 505-345-3975 Fax 505-345-4107	
Phone #: 433-704-5178	2RP - NA	Analysis Request	
email or Fax#: abaker@ltenv.com	Project Manager:		
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	Adrian Baker		
Accreditation: ☐ NELAP ☐ Other	Sampler: Josh Adams		
☐ EDD (Type)	On Ice: ☑ Yes ☐ No		
	Sample Temperature: 4.3°		

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803E13	TPH - 8015 DRO, MRO, GRO	BTEX - 8021	Chlorides - 300.1
3/22/2018	1130	SOIL	SS01 @ 1.5'	(1) 4oz.	cool	001	X	X	X
3/22/2018	1200	SOIL	SS02 @ 1'	(1) 4oz.	cool	002	X	X	X
3/22/2018	1315	SOIL	SS03 @ 1.5'	(1) 4oz.	cool	003	X	X	X
3/22/2018	1400	SOIL	SS04 @1.5'	(1) 4oz.	cool	004	X	X	X

3/23/2018	Time: 0730	Relinquished by:	Received by:	Date	Time
				3/23/18	0730
Date: 3/26/18	Time: 1900	Relinquished by:	Received by: Courier 3/27	Date	Time
				3/27/18	0930

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report 622956

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU Pierce Canyon 17

2RP-4656

07-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)

07-MAY-19

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

Reference: XENCO Report No(s): **622956**
PLU Pierce Canyon 17
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) 622956. 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. 622956 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 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	04-30-19 12:15	2 ft	622956-001
FS02	S	04-30-19 12:20	2 ft	622956-002
FS03	S	04-30-19 12:25	2 ft	622956-003
SW01	S	04-30-19 12:30	0 - 2 ft	622956-004
SW02	S	04-30-19 12:35	0 - 2 ft	622956-005
SW03	S	04-30-19 12:40	0 - 2 ft	622956-006
FS04	S	04-30-19 12:45	2 ft	622956-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Pierce Canyon 17

Project ID: *2RP-4656*
Work Order Number(s): *622956*

Report Date: *07-MAY-19*
Date Received: *05/02/2019*

Sample receipt non conformances and comments:

PER CLIENTS REQUEST RE RAN SAMPLE 004 FOR CL, IMPORTED RE RUN DATA. NER VERSION GENERATED. JK 05/07/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087778 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3087832 Chloride by EPA 300
Lab Sample ID 622956-005 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: 622956-001, -002, -003, -005, -006, -007.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 622956

LT Environmental, Inc., Arvada, CO

Project Name: PLU Pierce Canyon 17

Project Id: 2RP-4656
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-02-19 11:05 am
Report Date: 07-MAY-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	622956-001		622956-002		622956-003		622956-004		622956-005		622956-006	
	Field Id:	FS01		FS02		FS03		SW01		SW02		SW03	
	Depth:	2- ft		2- ft		2- ft		0-2 ft		0-2 ft		0-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-30-19 12:15		Apr-30-19 12:20		Apr-30-19 12:25		Apr-30-19 12:30		Apr-30-19 12:35		Apr-30-19 12:40	
BTEX by EPA 8021B	*Extracted:*	May-02-19 14:00		May-02-19 14:00		May-02-19 14:00		May-02-19 14:00		May-02-19 14:00		May-02-19 14:00	
	Analyzed:	May-03-19 01:54		May-03-19 02:13		May-03-19 02:32		May-03-19 02:51		May-03-19 03:10		May-03-19 03:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	May-03-19 09:00		May-03-19 09:00		May-03-19 09:00		May-03-19 15:00		May-03-19 09:00		May-03-19 09:00	
	Analyzed:	May-03-19 10:53		May-03-19 10:59		May-03-19 11:05		May-04-19 14:06		May-03-19 11:16		May-03-19 11:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		189	5.03	374	4.95	563	4.96	658	4.98	408	4.99	478	5.04
TPH by SW8015 Mod	*Extracted:*	May-02-19 12:00		May-02-19 12:00		May-02-19 12:00		May-02-19 12:00		May-02-19 12:00		May-02-19 12:00	
	Analyzed:	May-02-19 19:26		May-02-19 19:46		May-02-19 20:06		May-02-19 20:25		May-02-19 20:45		May-02-19 21:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	17.8	14.9	44.1	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	17.8	14.9	44.1	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	17.8	14.9	44.1	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622956

LT Environmental, Inc., Arvada, CO

Project Name: PLU Pierce Canyon 17

Project Id: 2RP-4656
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-02-19 11:05 am
Report Date: 07-MAY-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	622956-007					
	Field Id:	FS04					
	Depth:	2- ft					
	Matrix:	SOIL					
	Sampled:	Apr-30-19 12:45					
BTEX by EPA 8021B	***Extracted:***	May-02-19 14:00					
	Analyzed:	May-03-19 03:48					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	May-03-19 09:00					
	Analyzed:	May-03-19 11:39					
	Units/RL:	mg/kg	RL				
Chloride		563	5.02				
TPH by SW8015 Mod	***Extracted:***	May-02-19 12:00					
	Analyzed:	May-02-19 21:24					
	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				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-001	Date Collected:	04.30.19 12.15	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**189**	5.03	mg/kg	05.03.19 10.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 19.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.02.19 19.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 19.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.02.19 19.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.02.19 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.02.19 19.26	
o-Terphenyl	84-15-1	99	%	70-135	05.02.19 19.26	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-001	Date Collected:	04.30.19 12.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.03.19 01.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.03.19 01.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 01.54	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.03.19 01.54	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-002	Date Collected:	04.30.19 12.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**374**	4.95	mg/kg	05.03.19 10.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 19.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.02.19 19.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 19.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.02.19 19.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.02.19 19.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.02.19 19.46	
o-Terphenyl	84-15-1	100	%	70-135	05.02.19 19.46	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-002	Date Collected:	04.30.19 12.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.03.19 02.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.03.19 02.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.03.19 02.13	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.03.19 02.13	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-003	Date Collected:	04.30.19 12.25	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**563**	4.96	mg/kg	05.03.19 11.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 20.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.02.19 20.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 20.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.02.19 20.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.02.19 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.02.19 20.06	
o-Terphenyl	84-15-1	101	%	70-135	05.02.19 20.06	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-003	Date Collected:	04.30.19 12.25	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.03.19 02.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.03.19 02.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	05.03.19 02.32	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 02.32	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-004	Date Collected:	04.30.19 12.30	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 15.00	Basis:	Wet Weight
Seq Number:	3088000				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**658**	4.98	mg/kg	05.04.19 14.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.02.19 20.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.8**	14.9	mg/kg	05.02.19 20.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.02.19 20.25	U	1
Total TPH	PHC635	**17.8**	14.9	mg/kg	05.02.19 20.25		1
Total GRO-DRO	PHC628	**17.8**	14.9	mg/kg	05.02.19 20.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.02.19 20.25	
o-Terphenyl	84-15-1	99	%	70-135	05.02.19 20.25	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-004	Date Collected:	04.30.19 12.30	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.03.19 02.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.03.19 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	05.03.19 02.51	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 02.51	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-005	Date Collected:	04.30.19 12.35	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**408**	4.99	mg/kg	05.03.19 11.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 20.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**44.1**	15.0	mg/kg	05.02.19 20.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 20.45	U	1
Total TPH	PHC635	**44.1**	15.0	mg/kg	05.02.19 20.45		1
Total GRO-DRO	PHC628	**44.1**	15.0	mg/kg	05.02.19 20.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.02.19 20.45	
o-Terphenyl	84-15-1	99	%	70-135	05.02.19 20.45	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-005	Date Collected:	04.30.19 12.35	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.03.19 03.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.03.19 03.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.03.19 03.10	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 03.10	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-006	Date Collected:	04.30.19 12.40	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**478**	5.04	mg/kg	05.03.19 11.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 21.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.02.19 21.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 21.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.02.19 21.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.02.19 21.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.02.19 21.05	
o-Terphenyl	84-15-1	100	%	70-135	05.02.19 21.05	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-006	Date Collected:	04.30.19 12.40	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.03.19 03.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.03.19 03.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.03.19 03.29	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.03.19 03.29	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-007	Date Collected:	04.30.19 12.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.03.19 09.00	Basis:	Wet Weight
Seq Number:	3087832				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**563**	5.02	mg/kg	05.03.19 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.02.19 12.00	Basis:	Wet Weight
Seq Number:	3087797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 21.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.02.19 21.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 21.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.02.19 21.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.02.19 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.02.19 21.24	
o-Terphenyl	84-15-1	102	%	70-135	05.02.19 21.24	

Certificate of Analytical Results 622956

LT Environmental, Inc., Arvada, CO

PLU Pierce Canyon 17

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622956-007	Date Collected:	04.30.19 12.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 14.00	Basis:	Wet Weight
Seq Number:	3087778				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.03.19 03.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.03.19 03.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.03.19 03.48	
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.03.19 03.48	

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 622956

LT Environmental, Inc.

PLU Pierce Canyon 17

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087832 — Matrix: Solid — Date Prep: 05.03.19
MB Sample Id: 7677073-1-BLK — LCS Sample Id: 7677073-1-BKS — LCSD Sample Id: 7677073-1-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	249	100	90-110	0	20	mg/kg	05.03.19 09:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088000 — Matrix: Solid — Date Prep: 05.03.19
MB Sample Id: 7677139-1-BLK — LCS Sample Id: 7677139-1-BKS — LCSD Sample Id: 7677139-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.59	250	270	108	272	109	90-110	1	20	mg/kg	05.04.19 11:39	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087832 — Matrix: Soil — Date Prep: 05.03.19
Parent Sample Id: 622955-002 — MS Sample Id: 622955-002 S — MSD Sample Id: 622955-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	147	250	392	98	393	98	90-110	0	20	mg/kg	05.03.19 10:01	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087832 — Matrix: Soil — Date Prep: 05.03.19
Parent Sample Id: 622956-005 — MS Sample Id: 622956-005 S — MSD Sample Id: 622956-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	408	250	629	88	630	89	90-110	0	20	mg/kg	05.03.19 11:22	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088000 — Matrix: Soil — Date Prep: 05.03.19
Parent Sample Id: 623109-001 — MS Sample Id: 623109-001 S — MSD Sample Id: 623109-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.89	250	274	107	274	107	90-110	0	20	mg/kg	05.04.19 12:01	

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 622956

LT Environmental, Inc.

PLU Pierce Canyon 17

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3088000 Matrix: Soil Date Prep: 05.03.19
Parent Sample Id: 623200-002 MS Sample Id: 623200-002 S MSD Sample Id: 623200-002 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	250	299	107	300	108	90-110	0	20	mg/kg	05.04.19 13:52	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087797 Matrix: Solid Date Prep: 05.02.19
MB Sample Id: 7677065-1-BLK LCS Sample Id: 7677065-1-BKS LCSD Sample Id: 7677065-1-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	977	98	997	100	70-135	2	20	mg/kg	05.02.19 13:27	
Diesel Range Organics (DRO)	<8.13	1000	989	99	1020	102	70-135	3	20	mg/kg	05.02.19 13:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		125		130		70-135	%	05.02.19 13:27
o-Terphenyl	103		108		106		70-135	%	05.02.19 13:27

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087797 Matrix: Soil Date Prep: 05.02.19
Parent Sample Id: 622952-001 MS Sample Id: 622952-001 S MSD Sample Id: 622952-001 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)	3140	999	984	0	1010	0	70-135	3	20	mg/kg	05.02.19 14:28	X
Diesel Range Organics (DRO)	9120	999	1010	0	1040	0	70-135	3	20	mg/kg	05.02.19 14:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	05.02.19 14:28
o-Terphenyl	104		101		70-135	%	05.02.19 14:28

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

QC Summary 622956

LT Environmental, Inc.

PLU Pierce Canyon 17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087778 Matrix: Solid Date Prep: 05.02.19
MB Sample Id: 7677039-1-BLK LCS Sample Id: 7677039-1-BKS LCSD Sample Id: 7677039-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.109	108	0.103	103	70-130	6	35	mg/kg	05.02.19 23:04	
Toluene	<0.000459	0.101	0.103	102	0.0957	96	70-130	7	35	mg/kg	05.02.19 23:04	
Ethylbenzene	<0.000569	0.101	0.108	107	0.0990	99	70-130	9	35	mg/kg	05.02.19 23:04	
m,p-Xylenes	<0.00102	0.202	0.225	111	0.208	104	70-130	8	35	mg/kg	05.02.19 23:04	
o-Xylene	<0.000347	0.101	0.110	109	0.104	104	70-130	6	35	mg/kg	05.02.19 23:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		100		102		70-130	%	05.02.19 23:04
4-Bromofluorobenzene	84		92		100		70-130	%	05.02.19 23:04

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087778 Matrix: Soil Date Prep: 05.02.19
Parent Sample Id: 622953-001 MS Sample Id: 622953-001 S MSD Sample Id: 622953-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.104	104	0.0985	99	70-130	5	35	mg/kg	05.02.19 23:42	
Toluene	0.000488	0.0998	0.0962	96	0.0903	90	70-130	6	35	mg/kg	05.02.19 23:42	
Ethylbenzene	<0.000564	0.0998	0.0979	98	0.0912	91	70-130	7	35	mg/kg	05.02.19 23:42	
m,p-Xylenes	<0.00101	0.200	0.203	102	0.189	94	70-130	7	35	mg/kg	05.02.19 23:42	
o-Xylene	0.000359	0.0998	0.100	100	0.0935	93	70-130	7	35	mg/kg	05.02.19 23:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	05.02.19 23:42
4-Bromofluorobenzene	100		102		70-130	%	05.02.19 23:42

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: 672954

XENCO LABORATORIES

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

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Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096	Email:	bbelill@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 Pierce Canyon 17	Turn Around	
Project Number:	2RP-4656	Routine ☐	
P.O. Number:		Rush: 24 hr	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	0.9/0.3	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID:	NE
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 0=8021)	Chloride (EPA 300.0)
FS01	S	4/30/19	1215	2'	1	X	X	X
FS02			1220	2'		X	X	X
FS03			1225	2'		X	X	X
SW01			1230	0-2'		X	X	X
SW02			1235	0-2'		X	X	X
SW03			1240	0-2'		X	X	X
FS04	↓	↓	1245	2'	↓	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite Type

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

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		4/30/19 @ 1720	2		04-30-19 17:2
3			4		5/2/19
5			6		1105

Revised Date 051418 Rev. 2018.1

ORIGIN ID:CAOA (281) 240-4200
SAMPLE CUSTODY
XENCO LABORATORIES NM
1089 N CANAL ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 01MAY19
ACTWGT: 56.00 LB
CAD: 114488676/INET4100
DIMS: 24x14x14 IN

BILL SENDER

TO SAMPLE RECEIVING

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

(432) 704-5440

INV:
PO:
REF:
DEPT:

565J1/D66C/23AD

J191019010701uv

FedEx Express

TRK# 0201 7751 1156 8166

THU - 02 MAY HOLD

PRIORITY OVERNIGHT

HLD

79706

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/02/2019 11:05:00 AM

Work Order #: 622956

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?	**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)?	**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: 05/02/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/02/2019

Jessica Kramer

Analytical Report 623515

for

LT Environmental, Inc.

Project Manager: Ashley Ager

Pierce Canyon 17

2RP-4656

09-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)

09-MAY-19

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

Reference: XENCO Report No(s): **623515**
Pierce Canyon 17
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) 623515. 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. 623515 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

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 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	05-06-19 13:05	0.5 ft	623515-001
BH01A	S	05-06-19 13:20	2 ft	623515-002
BH02	S	05-06-19 14:00	0.5 ft	623515-003
BH02A	S	05-06-19 14:20	2 ft	623515-004
BH03	S	05-06-19 14:40	0.5 ft	623515-005
BH03A	S	05-06-19 14:50	2 ft	623515-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Pierce Canyon 17

Project ID: *2RP-4656*
Work Order Number(s): *623515*

Report Date: *09-MAY-19*
Date Received: *05/08/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088450 BTEX by EPA 8021B

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

Certificate of Analysis Summary 623515

LT Environmental, Inc., Arvada, CO

Project Name: Pierce Canyon 17

Project Id: 2RP-4656
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed May-08-19 01:23 pm
Report Date: 09-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	623515-001		623515-002		623515-003		623515-004		623515-005		623515-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	0.5- ft		2- ft		0.5- ft		2- ft		0.5- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-19 13:05		May-06-19 13:20		May-06-19 14:00		May-06-19 14:20		May-06-19 14:40		May-06-19 14:50	
BTEX by EPA 8021B	***Extracted:***	May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00	
	Analyzed:	May-08-19 22:00		May-08-19 22:19		May-08-19 22:38		May-08-19 22:57		May-08-19 23:16		May-08-19 23:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	May-08-19 16:00		May-08-19 16:00		May-08-19 16:00		May-08-19 16:00		May-08-19 16:00		May-08-19 16:00	
	Analyzed:	May-08-19 23:16		May-08-19 23:23		May-08-19 23:46		May-08-19 23:53		May-09-19 00:00		May-09-19 00:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		146	5.01	26.9	4.96	196	5.00	209	4.99	183	4.98	223	5.03
TPH by SW8015 Mod	***Extracted:***	May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00		May-08-19 14:00	
	Analyzed:	May-09-19 03:49		May-09-19 04:09		May-09-19 04:30		May-09-19 04:49		May-09-19 05:09		May-09-19 05:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		15.9	15.0	<15.0	15.0	35.8	15.0	<14.9	14.9	34.2	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		15.9	15.0	<15.0	15.0	35.8	15.0	<14.9	14.9	34.2	15.0	<15.0	15.0
Total GRO-DRO		15.9	15.0	<15.0	15.0	35.8	15.0	<14.9	14.9	34.2	15.0	<15.0	15.0

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

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-001	Date Collected:	05.06.19 13.05	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	5.01	mg/kg	05.08.19 23.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.09.19 03.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**15.9**	15.0	mg/kg	05.09.19 03.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.09.19 03.49	U	1
Total TPH	PHC635	**15.9**	15.0	mg/kg	05.09.19 03.49		1
Total GRO-DRO	PHC628	**15.9**	15.0	mg/kg	05.09.19 03.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.09.19 03.49	
o-Terphenyl	84-15-1	105	%	70-135	05.09.19 03.49	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-001	Date Collected:	05.06.19 13.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.08.19 22.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.08.19 22.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.08.19 22.00	
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.08.19 22.00	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-002	Date Collected:	05.06.19 13.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.9**	4.96	mg/kg	05.08.19 23.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.09.19 04.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.09.19 04.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.09.19 04.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.19 04.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.09.19 04.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.09.19 04.09	
o-Terphenyl	84-15-1	104	%	70-135	05.09.19 04.09	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-002	Date Collected:	05.06.19 13.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.08.19 22.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.08.19 22.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.08.19 22.19	
4-Bromofluorobenzene	460-00-4	78	%	70-130	05.08.19 22.19	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-003	Date Collected:	05.06.19 14.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**196**	5.00	mg/kg	05.08.19 23.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.09.19 04.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**35.8**	15.0	mg/kg	05.09.19 04.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.09.19 04.30	U	1
Total TPH	PHC635	**35.8**	15.0	mg/kg	05.09.19 04.30		1
Total GRO-DRO	PHC628	**35.8**	15.0	mg/kg	05.09.19 04.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.09.19 04.30	
o-Terphenyl	84-15-1	101	%	70-135	05.09.19 04.30	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-003	Date Collected:	05.06.19 14.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.08.19 22.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.08.19 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	05.08.19 22.38	
4-Bromofluorobenzene	460-00-4	77	%	70-130	05.08.19 22.38	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-004	Date Collected:	05.06.19 14.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**209**	4.99	mg/kg	05.08.19 23.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.09.19 04.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.09.19 04.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.09.19 04.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.09.19 04.49	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.09.19 04.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.09.19 04.49	
o-Terphenyl	84-15-1	104	%	70-135	05.09.19 04.49	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-004	Date Collected:	05.06.19 14.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.08.19 22.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.08.19 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.08.19 22.57	
4-Bromofluorobenzene	460-00-4	79	%	70-130	05.08.19 22.57	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-005	Date Collected:	05.06.19 14.40	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**183**	4.98	mg/kg	05.09.19 00.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.09.19 05.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**34.2**	15.0	mg/kg	05.09.19 05.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.09.19 05.09	U	1
Total TPH	PHC635	**34.2**	15.0	mg/kg	05.09.19 05.09		1
Total GRO-DRO	PHC628	**34.2**	15.0	mg/kg	05.09.19 05.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.09.19 05.09	
o-Terphenyl	84-15-1	109	%	70-135	05.09.19 05.09	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-005	Date Collected:	05.06.19 14.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.08.19 23.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.08.19 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.08.19 23.16	
4-Bromofluorobenzene	460-00-4	86	%	70-130	05.08.19 23.16	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-006	Date Collected:	05.06.19 14.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.08.19 16.00	Basis:	Wet Weight
Seq Number:	3088395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**223**	5.03	mg/kg	05.09.19 00.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088487				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.09.19 05.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.09.19 05.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.09.19 05.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.19 05.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.09.19 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.09.19 05.29	
o-Terphenyl	84-15-1	106	%	70-135	05.09.19 05.29	

Certificate of Analytical Results 623515

LT Environmental, Inc., Arvada, CO

Pierce Canyon 17

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.08.19 13.23
Lab Sample Id:	623515-006	Date Collected:	05.06.19 14.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.08.19 14.00	Basis:	Wet Weight
Seq Number:	3088450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.08.19 23.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.08.19 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.08.19 23.35	
4-Bromofluorobenzene	460-00-4	79	%	70-130	05.08.19 23.35	

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 623515

LT Environmental, Inc.

Pierce Canyon 17

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088395 — Matrix: Solid — Date Prep: 05.08.19
MB Sample Id: 7677453-1-BLK — LCS Sample Id: 7677453-1-BKS — LCSD Sample Id: 7677453-1-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	254	102	253	101	90-110	0	20	mg/kg	05.08.19 20:57	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088395 — Matrix: Soil — Date Prep: 05.08.19
Parent Sample Id: 623514-001 — MS Sample Id: 623514-001 S — MSD Sample Id: 623514-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.74	249	261	103	262	103	90-110	0	20	mg/kg	05.08.19 21:18	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3088395 — Matrix: Soil — Date Prep: 05.08.19
Parent Sample Id: 623514-011 — MS Sample Id: 623514-011 S — MSD Sample Id: 623514-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.37	248	264	104	262	103	90-110	1	20	mg/kg	05.08.19 23:01	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3088487 — Matrix: Solid — Date Prep: 05.08.19
MB Sample Id: 7677516-1-BLK — LCS Sample Id: 7677516-1-BKS — LCSD Sample Id: 7677516-1-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	1160	116	1130	113	70-135	3	20	mg/kg	05.08.19 22:12	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1160	116	70-135	4	20	mg/kg	05.08.19 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		128		129		70-135	%	05.08.19 22:12
o-Terphenyl	97		122		119		70-135	%	05.08.19 22:12

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 623515

LT Environmental, Inc.

Pierce Canyon 17

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3088487 — Matrix: Soil — Date Prep: 05.08.19
Parent Sample Id: 623514-001 — MS Sample Id: 623514-001 S — MSD Sample Id: 623514-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1030	103	1040	104	70-135	1	20	mg/kg	05.08.19 23:12	
Diesel Range Organics (DRO)	<8.12	999	1050	105	1050	105	70-135	0	20	mg/kg	05.08.19 23:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		128		70-135	%	05.08.19 23:12
o-Terphenyl	115		114		70-135	%	05.08.19 23:12

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3088450 — Matrix: Solid — Date Prep: 05.08.19
MB Sample Id: 7677504-1-BLK — LCS Sample Id: 7677504-1-BKS — LCSD Sample Id: 7677504-1-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	0.0880	88	0.0896	90	70-130	2	35	mg/kg	05.08.19 20:04	
Toluene	<0.000455	0.0998	0.0841	84	0.0858	86	70-130	2	35	mg/kg	05.08.19 20:04	
Ethylbenzene	<0.000564	0.0998	0.0923	92	0.0941	94	70-130	2	35	mg/kg	05.08.19 20:04	
m,p-Xylenes	<0.00101	0.200	0.190	95	0.195	97	70-130	3	35	mg/kg	05.08.19 20:04	
o-Xylene	<0.000344	0.0998	0.0954	96	0.0991	99	70-130	4	35	mg/kg	05.08.19 20:04	

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	%	05.08.19 20:04
4-Bromofluorobenzene	77		79		81		70-130	%	05.08.19 20:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3088450 — Matrix: Soil — Date Prep: 05.08.19
Parent Sample Id: 623515-001 — MS Sample Id: 623515-001 S — MSD Sample Id: 623515-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0824	82	0.0858	86	70-130	4	35	mg/kg	05.08.19 20:43	
Toluene	<0.000458	0.101	0.0771	76	0.0786	79	70-130	2	35	mg/kg	05.08.19 20:43	
Ethylbenzene	<0.000568	0.101	0.0844	84	0.0870	87	70-130	3	35	mg/kg	05.08.19 20:43	
m,p-Xylenes	<0.00102	0.201	0.174	87	0.179	90	70-130	3	35	mg/kg	05.08.19 20:43	
o-Xylene	<0.000346	0.101	0.0889	88	0.0921	92	70-130	4	35	mg/kg	05.08.19 20:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	05.08.19 20:43
4-Bromofluorobenzene	82		86		70-130	%	05.08.19 20:43

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: 673515

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

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096	Email:	bbelill@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:	Pierce Canyon 17	Turn Around	
Project Number:	(2RP-4656)	Routine ☐	
P.O. Number:		Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date: 5/8/19	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 | 0.2	Thermometer ID	VE	
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 0=8021)	Chloride (EPA 300.0)
BH01	S	5/6/19	1305	0.5'	1	X	X	X
BH01A			1320	2'		X	X	X
BH02			1400	0.5'		X	X	X
BH02A			1420	2'		X	X	X
BH03			1440	0.5'		X	X	X
BH03A			1450	2'		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			5/6/19 17:00	2		5/7/19 1303
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

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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.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/08/2019 01:23:00 PM

Work Order #: 623515

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/08/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/08/2019
Jessica Kramer

ATTACHMENT 4: PHOTOGRAPHIC LOG

View east of realese area and excavation boundary.

Project: 012918099	XTO Energy, Inc. Poker Lake Unit Pierce Canyon 17 Federal 1H Battery	LTE Advancing Opportunity
April 26, 2019	Photographic Log	

View east of the release area and excavation boundary.

Project: 012918099	XTO Energy, Inc. Poker Lake Unit Pierce Canyon 17 Federal 1H Battery	LTE Advancing Opportunity
April 30, 2019	Photographic Log	

View west of release area and excavation boundary.

Project: 012918099	XTO Energy, Inc. Poker Lake Unit Pierce Canyon 17 Federal 1H Battery	LTE Advancing Opportur
April 30, 2019	Photographic Log	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 194127

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 194127
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	3/7/2023