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	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

Release Notification CGHSS-190822-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1925435038
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.237180° Longitude -103.917184°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name SWD riser near Poker Lake Unit #158 CTB	Site Type Salt Water Disposal Pipeline
Date Release Discovered 8/7/2019	API# *(if applicable)* 30-015-31690 (Poker Lake Unit #158)

Unit Letter	Section	Township	Range	County
A	7	24S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 224.04	Volume Recovered (bbls) 200
	Is the concentration of total dissolved solids (TDS) in the produced water >10.000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A pinhole developed at a weld in a 12" SWD pipeline riser due to internal corrosion. The riser had recently been exposed for upgrades. Fluid escaping the pinhole were contained in the excavated area on the ROW while the line was isolated. A vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos, Deborah McKinney, and Yolanda Jimenez (BLM) on 8/8/2019 by email

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 8/22/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 9/11/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NAB1925435038
District RP	2RP-5612
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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	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

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: 12/2/2019

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 12/2/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

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

December 2, 2019

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

RE: Closure Request
SWD Riser Near Poker Lake Unit #158 CTB
Remediation Permit Number 2RP-5612
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment and soil sampling activities at the Salt Water Disposal (SWD) Pipeline riser near the SWD riser near Poker Lake Unit #158 CTB (Site) in Unit A, Section 7, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities is to confirm the presence or absence of impacts to soil following a release of produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Request and requesting no further action for Remediation Permit (RP) Number 2RP-5612.

RELEASE BACKGROUND

On August 7, 2019, a pinhole developed at a weld in a 12-inch pipeline riser due to internal corrosion causing approximately 224.04 barrels (bbls) of produced water to be released. The riser had recently been exposed for upgrades leaving an open excavation adjacent to the release. Fluids escaping the pinhole were contained in the existing excavated area on the right of way (ROW) while the line was isolated. A vacuum truck recovered approximately 200 bbls of free fluids from the excavated area. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 22, 2019 and was assigned RP Number 2RP-5612 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The closest permitted water well with depth to water data is New Mexico Office of the State Engineer (NM OSE) well C02108, located

approximately 3,199 feet southeast of the Site. The water well has a depth to groundwater of approximately 186 feet bgs and a total depth of 200 feet bgs.

The closest continuously-flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 3,290 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On September 24, 2019, LTE personnel conducted Site reconnaissance to evaluate the release extent based on information provided on Form C-141 and visual observations. LTE personnel collected 5 discrete soil samples at a depth of 0.5 feet bgs (Figure 2).

On November 5, 2019, LTE personnel advanced 3 boreholes via hand auger to confirm the presence or absence of impacted soil. Boreholes BH01 through BH03 were advanced to a depth of 2 feet bgs. Two delineation soil samples were collected from each borehole from depths of 0.5 and 2 feet bgs. Soil from the boreholes was field screened for volatile aromatic hydrocarbons utilizing a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each borehole were logged on lithologic/soil sampling logs (Attachment 2). All boreholes were backfilled with the removed soil. The boreholes and delineation soil sample locations are depicted on Figure 3.

The soil samples from each event were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following

United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Based on laboratory analytical results for the delineation soil samples collected on November 5, 2019, additional excavation activities did not appear to be necessary. Photographic documentation was taken during the Site visit (Attachment 3).

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 through SS05 and in delineation soil samples BH01/BH01A through BH03/BH03A collected at depths of approximately 0.5 and 2 feet bgs. Laboratory analytical results are presented on Figure 3, and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS

Delineation soil samples BH01/BH01A through BH03/BH03A were collected from within the release extent from depths of 0.5 and 2 feet bgs to assess for the presence or absence of soil impacts as a result of the August 7, 2019 release. Laboratory analytical results for all soil samples indicated benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, field screening of soil indicated volatile aromatic hydrocarbons and chloride concentrations were not elevated and soil staining and petroleum hydrocarbon odors were not identified within the release extent.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria, no impacted soil was identified and no soil excavation was required as a result of the produced water release. XTO requests no further action for RP Number 2RP-5612. An updated Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Allison S. White, P.E.
Project Engineer

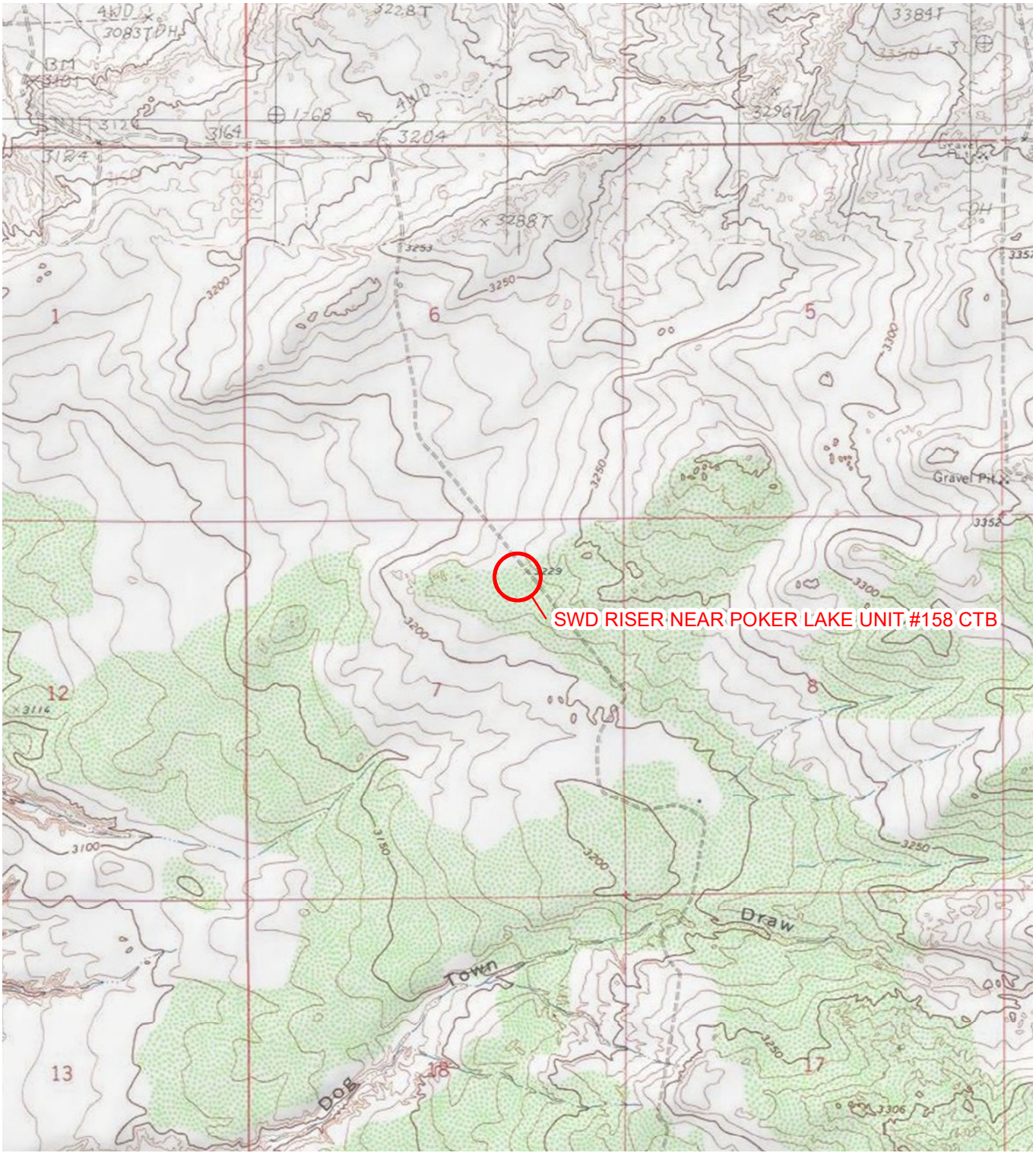
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
United States Bureau of Land Management – New Mexico
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5612)
Attachment 2	Lithologic/Soil Sampling Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

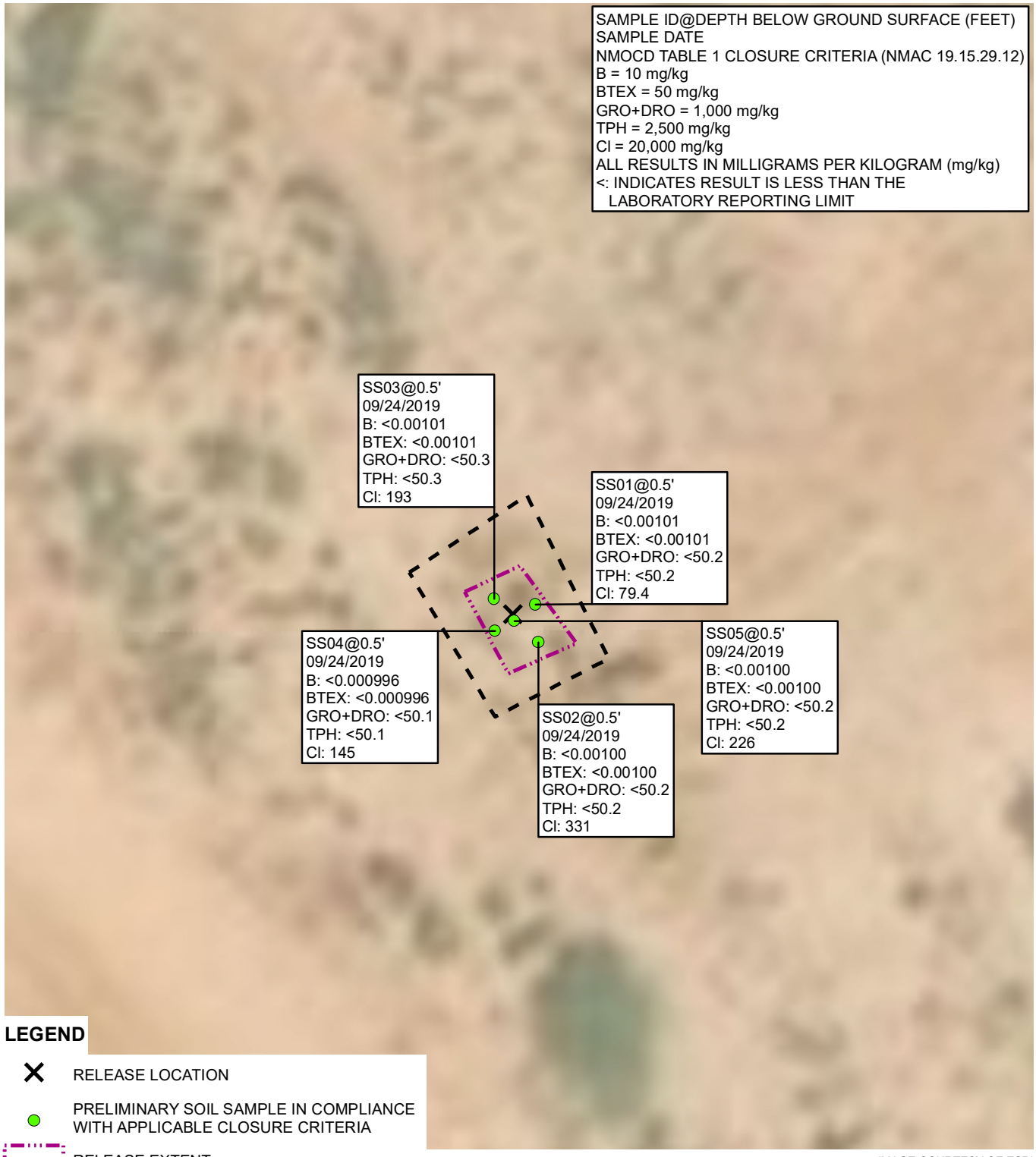
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5612

FIGURE 1
SITE LOCATION MAP
SWD RISER NEAR POKER LAKE UNIT #158 CTB
UNIT A SEC 7 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

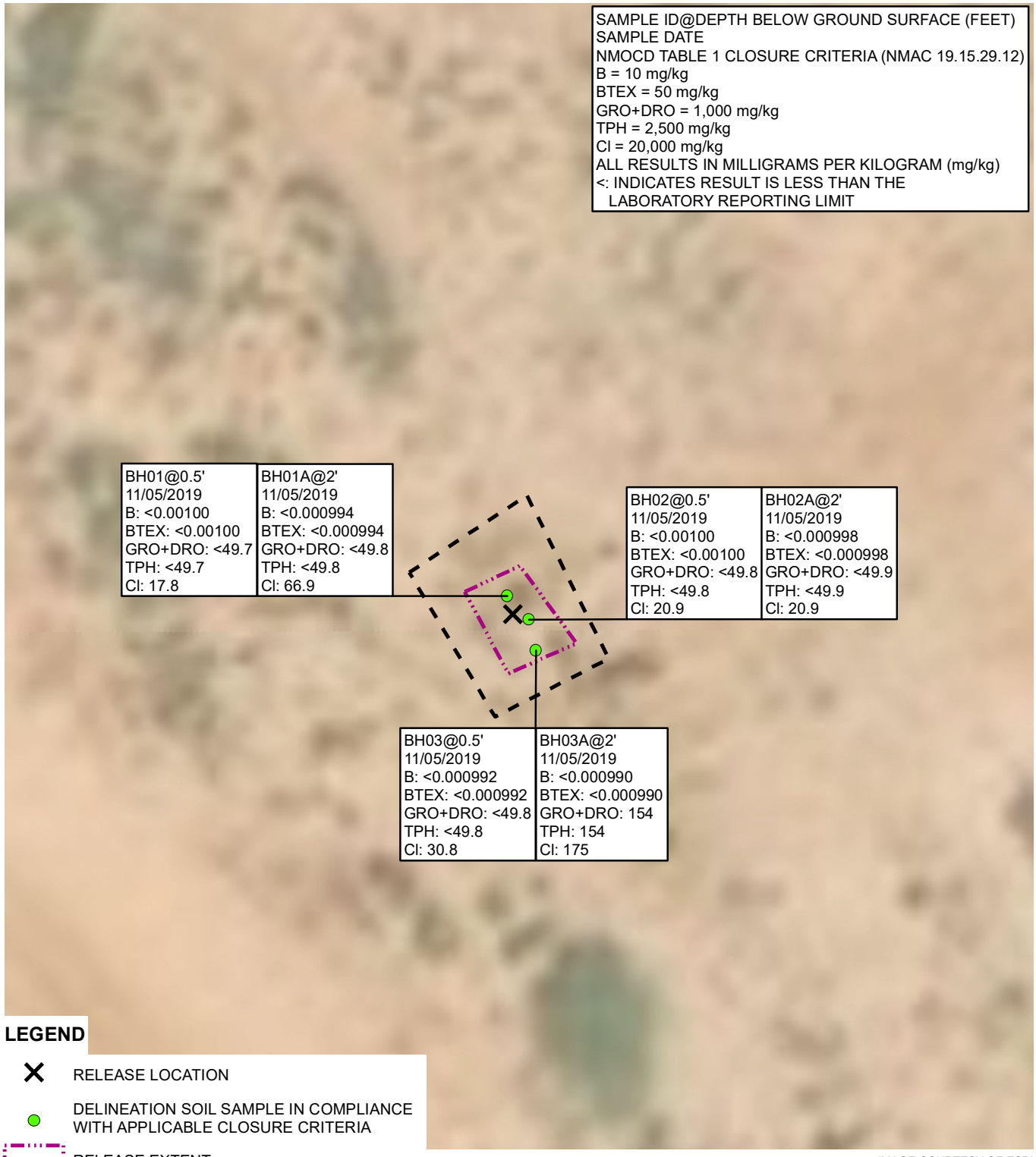
P:\XTO Energy\GIS\MXD\012919179_SWD RISER NEAR PLU 158 CTB\012919179_FIG01_SL_5612.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5612

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
SWD RISER NEAR POKER LAKE UNIT #158 CTB
UNIT A SEC 7 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919179_SWD RISER NEAR PLU 158 CTB\012919179_FIG02_PRELIMINARY_5612.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5612

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
SWD RISER NEAR POKER LAKE UNIT #158 CTB
UNIT A SEC 7 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919179_SWD RISER NEAR PLU 158 CTB\012919179_FIG03_DELINEATION_5612.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

PLU 158-RISER
REMEDIATION PERMIT NUMBER (2RP-5612)
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	09/24/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	79.4
SS02	0.5	09/24/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	331
SS03	0.5	09/24/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	193
SS04	0.5	09/24/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.1	<50.1	<50.1	<50.1	<50.1	145
SS05	0.5	09/24/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	226
BH01	0.5	11/05/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.7	<49.7	<49.7	<49.7	<49.7	17.8
BH01A	2.0	11/05/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.8	<49.8	<49.8	<49.8	<49.8	66.9
BH02	0.5	11/05/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	17.7
BH02A	2.0	11/05/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.9	<49.9	<49.9	<49.9	<49.9	20.9
BH03	0.5	11/05/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<49.8	<49.8	<49.8	<49.8	<49.8	30.8
BH03A	2.0	11/05/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.8	154	<49.8	154	154	175
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5612)

District I
1625 N. French Dr., Hobbs, NM 88240
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District III
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District IV
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State of New Mexico
Energy Minerals and Natural Resources Department

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1220 South St. Francis Dr.
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Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1925435038
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Facility ID	
Application ID	pAB1925434009

Release Notification CGHSS-190822-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1925435038
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.237180° Longitude -103.917184°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name SWD riser near Poker Lake Unit #158 CTB	Site Type Salt Water Disposal Pipeline
Date Release Discovered 8/7/2019	API# *(if applicable)* 30-015-31690 (Poker Lake Unit #158)

Unit Letter	Section	Township	Range	County
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Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 224.04	Volume Recovered (bbls) 200
	Is the concentration of total dissolved solids (TDS) in the produced water >10.000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A pinhole developed at a weld in a 12" SWD pipeline riser due to internal corrosion. The riser had recently been exposed for upgrades. Fluid escaping the pinhole were contained in the excavated area on the ROW while the line was isolated. A vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos, Deborah McKinney, and Yolanda Jimenez (BLM) on 8/8/2019 by email

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 8/22/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 9/11/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

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	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

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: 12/2/2019

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	NAB1925435038
District RP	2RP-5612
Facility ID	
Application ID	pAB1925434009

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 12/2/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLING LOGS

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

Identifier:	Date:
BH01	11/5/2019
PLU-200 Flowline	2RP-5612

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: KJH	Method: Sand Auger

Lat/Long:	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<27	0.0	n	BH01	0	0.5	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
dry	<27	0.0	n	BH01A	2	2	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH02	11/5/2019
PLU-158 Riser	2RP-5612

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: KJH	Method: Sand Auger
Lat/Long:	Field Screening: Chloride, TPH
Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<27	0.1	n	BH02	0	0.5	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
dry	<27	0.0	n	BH02A	2	2	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
								Total Depth 2 feet bgs

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH03	Date: 11/5/2019
		PLU-158 Riser	2RP-5612
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: KJH	Method: Sand Auger
Lat/Long:	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<27	0.1	n	BH03	0	0.5	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
dry	163	0.4	n	BH03A	2	2	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
								Total Depth 2 feet bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

Existing excavation from recently exposing the riser and release facing east during Site assessment activities.

Project: 012919179	XTO Energy, Inc. Salt Water Disposal Pipeline Riser near Poker Lake Unit #128 CTB	LTE Advancing Opportunity
September 24, 2019	Photographic Log	

Existing excavation from recently exposing the riser and release facing north during Site assessment activities.

Project: 012919179	XTO Energy, Inc. Salt Water Disposal Pipeline Riser near Poker Lake Unit #128 CTB	LTE Advancing Opportunity
September 24, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 637933

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 158 Riser

012919179

27-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

27-SEP-19

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

Reference: XENCO Report No(s): **637933**
PLU 158 Riser
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637933. 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. 637933 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 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09-24-19 11:47	0.5 ft	637933-001
SS02	S	09-24-19 11:47	0.5 ft	637933-002
SS03	S	09-24-19 11:48	0.5 ft	637933-003
SS04	S	09-24-19 11:49	0.5 ft	637933-004
SS05	S	09-24-19 11:50	0.5 ft	637933-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 158 Riser

Project ID: *012919179*
Work Order Number(s): *637933*

Report Date: *27-SEP-19*
Date Received: *09/25/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102566 BTEX by EPA 8021B

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

Certificate of Analysis Summary 637933

LT Environmental, Inc., Arvada, CO

Project Name: PLU 158 Riser

Project Id: 012919179
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Sep-25-19 07:55 am
Report Date: 27-SEP-19
Project Manager: Jessica Kramer

Analysis Requested																
	Lab Id:	637933-001		637933-002		637933-003		637933-004		637933-005						
	Field Id:	SS01		SS02		SS03		SS04		SS05						
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft						
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL						
	Sampled:	Sep-24-19 11:47		Sep-24-19 11:47		Sep-24-19 11:48		Sep-24-19 11:49		Sep-24-19 11:50						
BTEX by EPA 8021B	*Extracted:*	Sep-25-19 11:00		Sep-25-19 11:00		Sep-25-19 11:00		Sep-25-19 11:00		Sep-25-19 11:00						
	Analyzed:	Sep-25-19 16:17		Sep-25-19 16:37		Sep-25-19 16:57		Sep-25-19 17:17		Sep-25-19 17:37						
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL					
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
Toluene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
Ethylbenzene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
m,p-Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200					
o-Xylene		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
Total Xylenes		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
Total BTEX		<0.00101	0.00101	<0.00100	0.00100	<0.00101	0.00101	<0.000996	0.000996	<0.00100	0.00100					
Chloride by EPA 300	*Extracted:*	Sep-25-19 13:09		Sep-25-19 13:09		Sep-25-19 13:09		Sep-25-19 13:09		Sep-25-19 13:09						
	Analyzed:	Sep-25-19 16:09		Sep-25-19 16:29		Sep-25-19 16:36		Sep-25-19 16:43		Sep-25-19 16:50						
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL					
Chloride		79.4	9.98	331 D	20.0	193	10.1	145	9.92	226	10.1					
TPH by SW8015 Mod	*Extracted:*	Sep-25-19 10:40		Sep-25-19 10:40		Sep-25-19 10:40		Sep-25-19 10:40		Sep-25-19 10:40						
	Analyzed:	Sep-25-19 14:05		Sep-25-19 14:58		Sep-25-19 15:18		Sep-25-19 15:38		Sep-25-19 15:59						
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.2	50.2					
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.2	50.2					
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.2	50.2					
Total GRO-DRO		<50.2	50.2	<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.2	50.2					
Total TPH		<50.2	50.2	<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.2	50.2					

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-001	Date Collected:	09.24.19 11.47	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.25.19 13.09	Basis:	Wet Weight
Seq Number:	3102478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**79.4**	9.98	mg/kg	09.25.19 16.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 10.40	Basis:	Wet Weight
Seq Number:	3102569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.25.19 14.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.25.19 14.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.25.19 14.05	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.25.19 14.05	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.25.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.25.19 14.05	
o-Terphenyl	84-15-1	94	%	70-135	09.25.19 14.05	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-001	Date Collected:	09.24.19 11.47	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 11.00	Basis:	Wet Weight
Seq Number:	3102566				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.25.19 16.17	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.25.19 16.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	09.25.19 16.17	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.25.19 16.17	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-002	Date Collected:	09.24.19 11.47	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.25.19 13.09	Basis:	Wet Weight
Seq Number:	3102478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**331**	20.0	mg/kg	09.25.19 17.10	D	2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 10.40	Basis:	Wet Weight
Seq Number:	3102569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.25.19 14.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.25.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.25.19 14.58	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.25.19 14.58	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.25.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.25.19 14.58	
o-Terphenyl	84-15-1	91	%	70-135	09.25.19 14.58	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-002	Date Collected:	09.24.19 11.47	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 11.00	Basis:	Wet Weight
Seq Number:	3102566				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.25.19 16.37	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.25.19 16.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.25.19 16.37	
4-Bromofluorobenzene	460-00-4	85	%	70-130	09.25.19 16.37	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-003	Date Collected:	09.24.19 11.48	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.25.19 13.09	Basis:	Wet Weight
Seq Number:	3102478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	10.1	mg/kg	09.25.19 16.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 10.40	Basis:	Wet Weight
Seq Number:	3102569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	09.25.19 15.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	09.25.19 15.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.25.19 15.18	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	09.25.19 15.18	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.25.19 15.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.25.19 15.18	
o-Terphenyl	84-15-1	96	%	70-135	09.25.19 15.18	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-003	Date Collected:	09.24.19 11.48	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 11.00	Basis:	Wet Weight
Seq Number:	3102566				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.25.19 16.57	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.25.19 16.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.25.19 16.57	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.25.19 16.57	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-004	Date Collected:	09.24.19 11.49	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.25.19 13.09	Basis:	Wet Weight
Seq Number:	3102478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**145**	9.92	mg/kg	09.25.19 16.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 10.40	Basis:	Wet Weight
Seq Number:	3102569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.25.19 15.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.25.19 15.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.25.19 15.38	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.25.19 15.38	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.25.19 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.25.19 15.38	
o-Terphenyl	84-15-1	95	%	70-135	09.25.19 15.38	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-004	Date Collected:	09.24.19 11.49	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 11.00	Basis:	Wet Weight
Seq Number:	3102566				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.25.19 17.17	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.25.19 17.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.25.19 17.17	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.25.19 17.17	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-005	Date Collected:	09.24.19 11.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.25.19 13.09	Basis:	Wet Weight
Seq Number:	3102478				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**226**	10.1	mg/kg	09.25.19 16.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 10.40	Basis:	Wet Weight
Seq Number:	3102569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.25.19 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.25.19 15.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.25.19 15.59	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.25.19 15.59	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.25.19 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.25.19 15.59	
o-Terphenyl	84-15-1	93	%	70-135	09.25.19 15.59	

Certificate of Analytical Results 637933

LT Environmental, Inc., Arvada, CO

PLU 158 Riser

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	09.25.19 07.55
Lab Sample Id:	637933-005	Date Collected:	09.24.19 11.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.25.19 11.00	Basis:	Wet Weight
Seq Number:	3102566				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.25.19 17.37	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.25.19 17.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.25.19 17.37	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.25.19 17.37	

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 637933

LT Environmental, Inc.

PLU 158 Riser

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3102478 — Matrix: Solid — Date Prep: 09.25.19
MB Sample Id: 7686856-1-BLK — LCS Sample Id: 7686856-1-BKS — LCSD Sample Id: 7686856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	255	102	90-110	0	20	mg/kg	09.25.19 14:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3102478 — Matrix: Soil — Date Prep: 09.25.19
Parent Sample Id: 637933-001 — MS Sample Id: 637933-001 S — MSD Sample Id: 637933-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	79.4	199	286	104	296	109	90-110	3	20	mg/kg	09.25.19 16:16	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102569 — Matrix: Solid — Date Prep: 09.25.19
MB Sample Id: 7686881-1-BLK — LCS Sample Id: 7686881-1-BKS — LCSD Sample Id: 7686881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1110	111	1160	116	70-135	4	35	mg/kg	09.25.19 12:01	
Diesel Range Organics (DRO)	<50.0	1000	1220	122	1340	134	70-135	9	35	mg/kg	09.25.19 12:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		120		114		70-135	%	09.25.19 12:01
o-Terphenyl	94		118		117		70-135	%	09.25.19 12:01

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102569 — Matrix: Soil — Date Prep: 09.25.19
Parent Sample Id: 637840-013 — MS Sample Id: 637840-013 S — MSD Sample Id: 637840-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	984	97	976	98	70-135	1	35	mg/kg	09.25.19 13:03	
Diesel Range Organics (DRO)	<50.3	1010	1130	112	1130	113	70-135	0	35	mg/kg	09.25.19 13:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		110		70-135	%	09.25.19 13:03
o-Terphenyl	111		111		70-135	%	09.25.19 13:03

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 637933

LT Environmental, Inc.

PLU 158 Riser

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102566 | Matrix: Solid | Date Prep: 09.25.19
MB Sample Id: 7686884-1-BLK | LCS Sample Id: 7686884-1-BKS | LCSD Sample Id: 7686884-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0817	82	0.0903	90	70-130	10	35	mg/kg	09.25.19 13:58	
Toluene	<0.00100	0.100	0.0864	86	0.0960	96	70-130	11	35	mg/kg	09.25.19 13:58	
Ethylbenzene	<0.00100	0.100	0.101	101	0.114	114	71-129	12	35	mg/kg	09.25.19 13:58	
m,p-Xylenes	<0.00200	0.200	0.207	104	0.232	116	70-135	11	35	mg/kg	09.25.19 13:58	
o-Xylene	<0.00100	0.100	0.103	103	0.116	116	71-133	12	35	mg/kg	09.25.19 13:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		100		70-130	%	09.25.19 13:58
4-Bromofluorobenzene	100		108		108		70-130	%	09.25.19 13:58

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102566 | Matrix: Solid | Date Prep: 09.25.19
Parent Sample Id: 637840-013 | MS Sample Id: 637840-013 S | MSD Sample Id: 637840-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0780	77	0.0826	82	70-130	6	35	mg/kg	09.25.19 15:17	
Toluene	<0.00101	0.101	0.0808	80	0.0824	82	70-130	2	35	mg/kg	09.25.19 15:17	
Ethylbenzene	<0.00101	0.101	0.0974	96	0.0988	98	71-129	1	35	mg/kg	09.25.19 15:17	
m,p-Xylenes	<0.00202	0.202	0.196	97	0.200	99	70-135	2	35	mg/kg	09.25.19 15:17	
o-Xylene	<0.00101	0.101	0.0981	97	0.100	99	71-133	2	35	mg/kg	09.25.19 15:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		106		70-130	%	09.25.19 15:17
4-Bromofluorobenzene	115		111		70-130	%	09.25.19 15:17

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 637933

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	wmather@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 158 Riser	Turn Around	
Project Number:	12919179	Routine	☑
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.0	Thermometer ID	TNM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	5	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Work Order Notes / Sample Comments
SS01	s	9/24/2019	11:47	0.5	1	x	x	x	discrete
SS02	s	9/24/2019	11:47	0.5	1	x	x	x	discrete
SS03	s	9/24/2019	11:48	0.5	1	x	x	x	discrete
SS04	s	9/24/2019	11:49	0.5	1	x	x	x	discrete
SS05	s	9/24/2019	11:50	0.5	1	x	x	x	discrete

ANALYSIS REQUEST

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			9/25/19 07:55	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/25/2019 07:55:00 AM

Work Order #: 637933

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/25/2019

Checklist reviewed by: Jessica Kramer Date: 09/25/2019

Jessica Kramer

Analytical Report 642182

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU -158 Riser

012919179

07-NOV-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

07-NOV-19

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

Reference: XENCO Report No(s): **642182**
PLU -158 Riser
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 642182. 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. 642182 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 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	11-05-19 09:45	0.5 ft	642182-001
BH01A	S	11-05-19 09:51	2.0 ft	642182-002
BH02	S	11-05-19 10:06	0.5 ft	642182-003
BH02A	S	11-05-19 10:10	2.0 ft	642182-004
BH03	S	11-05-19 10:18	0.5 ft	642182-005
BH03A	S	11-05-19 10:24	2.0 ft	642182-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU -158 Riser

Project ID: *012919179*
Work Order Number(s): *642182*

Report Date: *07-NOV-19*
Date Received: *11/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106685 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 642182-006.

Batch: LBA-3106690 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 642182-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 642182-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Benzene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 642182

LT Environmental, Inc., Arvada, CO

Project Name: PLU -158 Riser

Project Id: 012919179
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Nov-06-19 08:10 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642182-001		642182-002		642182-003		642182-004		642182-005		642182-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	0.5- ft		2.0- ft		0.5- ft		2.0- ft		0.5- ft		2.0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-05-19 09:45		Nov-05-19 09:51		Nov-05-19 10:06		Nov-05-19 10:10		Nov-05-19 10:18		Nov-05-19 10:24	
BTEX by EPA 8021B	***Extracted:***	Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11	
	Analyzed:	Nov-06-19 12:54		Nov-06-19 13:13		Nov-06-19 13:32		Nov-06-19 13:52		Nov-06-19 14:58		Nov-06-19 15:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
Toluene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
Ethylbenzene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
m,p-Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
o-Xylene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
Total Xylenes		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
Total BTEX		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.000992	0.000992	<0.000990	0.000990
Chloride by EPA 300	***Extracted:***	Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00	
	Analyzed:	Nov-06-19 11:03		Nov-06-19 11:20		Nov-06-19 11:26		Nov-06-19 11:32		Nov-06-19 12:08		Nov-06-19 12:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		17.8	10.0	66.9	9.88	17.7	9.98	20.9	9.86	30.8	10.1	175	10.1
TPH by SW8015 Mod	***Extracted:***	Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00	
	Analyzed:	** ** ** **		Nov-06-19 12:57		Nov-06-19 13:16		Nov-06-19 13:36		Nov-06-19 13:56		Nov-07-19 08:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.7	49.7	<49.8	49.8	<49.8	49.8	<49.9	49.9	<49.8	49.8	<49.8	49.8
Diesel Range Organics (DRO)		<49.7	49.7	<49.8	49.8	<49.8	49.8	<49.9	49.9	<49.8	49.8	154	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.7	49.7	<49.8	49.8	<49.8	49.8	<49.9	49.9	<49.8	49.8	<49.8	49.8
Total GRO-DRO		<49.7	49.7	<49.8	49.8	<49.8	49.8	<49.9	49.9	<49.8	49.8	154	49.8
Total TPH		<49.7	49.7	<49.8	49.8	<49.8	49.8	<49.9	49.9	<49.8	49.8	154	49.8

Jessica Kramer
Project Assistant

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-001	Date Collected:	11.05.19 09.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.8**	10.0	mg/kg	11.06.19 11.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	11.06.19 11.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	11.06.19 11.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	11.06.19 11.57	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	11.06.19 11.57	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	11.06.19 11.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.06.19 11.57	
o-Terphenyl	84-15-1	111	%	70-135	11.06.19 11.57	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-001	Date Collected:	11.05.19 09.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 12.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.06.19 12.54	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.06.19 12.54	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-002	Date Collected:	11.05.19 09.51	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.9**	9.88	mg/kg	11.06.19 11.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 12.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 12.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 12.57	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 12.57	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 12.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.06.19 12.57	
o-Terphenyl	84-15-1	113	%	70-135	11.06.19 12.57	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-002	Date Collected:	11.05.19 09.51	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.06.19 13.13	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1
Total BTEX		<0.000994	0.000994	mg/kg	11.06.19 13.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.06.19 13.13	
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.06.19 13.13	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-003	Date Collected:	11.05.19 10.06	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.7**	9.98	mg/kg	11.06.19 11.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 13.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 13.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 13.16	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 13.16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 13.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.06.19 13.16	
o-Terphenyl	84-15-1	107	%	70-135	11.06.19 13.16	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-003	Date Collected:	11.05.19 10.06	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 13.32	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.06.19 13.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.06.19 13.32	
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.06.19 13.32	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-004	Date Collected:	11.05.19 10.10	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.9**	9.86	mg/kg	11.06.19 11.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.06.19 13.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.06.19 13.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.06.19 13.36	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.06.19 13.36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.06.19 13.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.06.19 13.36	
o-Terphenyl	84-15-1	111	%	70-135	11.06.19 13.36	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-004	Date Collected:	11.05.19 10.10	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 13.52	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.06.19 13.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.06.19 13.52	
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.06.19 13.52	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-005	Date Collected:	11.05.19 10.18	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.8**	10.1	mg/kg	11.06.19 12.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 13.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 13.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 13.56	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 13.56	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 13.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.06.19 13.56	
o-Terphenyl	84-15-1	109	%	70-135	11.06.19 13.56	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-005	Date Collected:	11.05.19 10.18	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.06.19 14.58	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1
Total BTEX		<0.000992	0.000992	mg/kg	11.06.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.06.19 14.58	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.06.19 14.58	

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-006	Date Collected:	11.05.19 10.24	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**175**	10.1	mg/kg	11.06.19 12.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.07.19 08.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**154**	49.8	mg/kg	11.07.19 08.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.07.19 08.59	U	1
Total GRO-DRO	PHC628	**154**	49.8	mg/kg	11.07.19 08.59		1
Total TPH	PHC635	**154**	49.8	mg/kg	11.07.19 08.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	11.07.19 08.59	
o-Terphenyl	84-15-1	136	%	70-135	11.07.19 08.59	**

Certificate of Analytical Results 642182

LT Environmental, Inc., Arvada, CO

PLU -158 Riser

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642182-006	Date Collected:	11.05.19 10.24	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.06.19 15.17	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1
Total BTEX		<0.000990	0.000990	mg/kg	11.06.19 15.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	11.06.19 15.17	
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.06.19 15.17	

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 642182

LT Environmental, Inc.

PLU -158 Riser

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3106646 Matrix: Solid Date Prep: 11.06.19
MB Sample Id: 7689722-1-BLK LCS Sample Id: 7689722-1-BKS LCSD Sample Id: 7689722-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	239	96	234	94	90-110	2	20	mg/kg	11.06.19 10:51	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3106646 Matrix: Soil Date Prep: 11.06.19
Parent Sample Id: 642182-001 MS Sample Id: 642182-001 S MSD Sample Id: 642182-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.8	199	230	107	232	108	90-110	1	20	mg/kg	11.06.19 11:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3106685 Matrix: Solid Date Prep: 11.06.19
MB Sample Id: 7689771-1-BLK LCS Sample Id: 7689771-1-BKS LCSD Sample Id: 7689771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	936	94	924	92	70-135	1	35	mg/kg	11.06.19 11:18	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	999	100	70-135	5	35	mg/kg	11.06.19 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		121		134		70-135	%	11.06.19 11:18
o-Terphenyl	116		120		121		70-135	%	11.06.19 11:18

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3106685 Matrix: Solid Date Prep: 11.06.19
MB Sample Id: 7689771-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 10:58	

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 642182

LT Environmental, Inc.

PLU -158 Riser

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3106685 | Matrix: Soil | Date Prep: 11.06.19
Parent Sample Id: 642182-001 | MS Sample Id: 642182-001 S | MSD Sample Id: 642182-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	922	92	911	91	70-135	1	35	mg/kg	11.06.19 12:17	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.06.19 12:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		117		70-135	%	11.06.19 12:17
o-Terphenyl	119		115		70-135	%	11.06.19 12:17

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3106690 | Matrix: Solid | Date Prep: 11.06.19
MB Sample Id: 7689767-1-BLK | LCS Sample Id: 7689767-1-BKS | LCSD Sample Id: 7689767-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0931	93	0.0911	91	70-130	2	35	mg/kg	11.06.19 11:12	
Toluene	<0.00100	0.100	0.0943	94	0.0930	93	70-130	1	35	mg/kg	11.06.19 11:12	
Ethylbenzene	<0.00100	0.100	0.0950	95	0.0943	94	71-129	1	35	mg/kg	11.06.19 11:12	
m,p-Xylenes	<0.00200	0.200	0.203	102	0.201	101	70-135	1	35	mg/kg	11.06.19 11:12	
o-Xylene	<0.00100	0.100	0.100	100	0.0980	98	71-133	2	35	mg/kg	11.06.19 11:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		96		70-130	%	11.06.19 11:12
4-Bromofluorobenzene	104		105		100		70-130	%	11.06.19 11:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3106690 | Matrix: Soil | Date Prep: 11.06.19
Parent Sample Id: 642182-001 | MS Sample Id: 642182-001 S | MSD Sample Id: 642182-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0640	63	0.0717	71	70-130	11	35	mg/kg	11.06.19 11:50	X
Toluene	<0.00101	0.101	0.0805	80	0.0729	72	70-130	10	35	mg/kg	11.06.19 11:50	
Ethylbenzene	<0.00101	0.101	0.0849	84	0.0723	72	71-129	16	35	mg/kg	11.06.19 11:50	
m,p-Xylenes	<0.00202	0.202	0.173	86	0.155	77	70-135	11	35	mg/kg	11.06.19 11:50	
o-Xylene	<0.00101	0.101	0.0841	83	0.0771	76	71-133	9	35	mg/kg	11.06.19 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		100		70-130	%	11.06.19 11:50
4-Bromofluorobenzene	109		118		70-130	%	11.06.19 11:50

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

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

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

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

Chain of Custody

Work Order No: 442182

XENCO LABORATORIES

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

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad nm 88220
Phone:	(432) 236-3849	Email:	khenry@ltenv.com, wmather@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU-158 Riser	Turn Around	
Project Number:	012919179 (2RP-5612	Routine ☐	
P.O. Number:		Rush: 24h	
Sampler's Name:	Kaleb Henry	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.5	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01	S	11/5/19	945	0.5'	1	X	X	X
BH01A			951	2.0'	1			
BH02			1006	0.5'	1			
BH02A			1010	2.0'	1			
BH03			1018	0.5'	1			
BH03A			1024	2.0	1			

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		11/6/19 08:10	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/06/2019 08:10:00 AM

Work Order #: 642182

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 11/06/2019

Checklist reviewed by: Jessica Kramer Date: 11/06/2019