

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	NAB1914334905
District RP	2RP-5442
Facility ID	
Application ID	pAB1914332309

Release Notification

Responsible Party

Responsible Party	XTO Energy	OGRID	5380
Contact Name	Kyle Littrell	Contact Telephone	432-221-7331
Contact email	Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD)	NAB1914334905
Contact mailing address	522 W. Mermod, Carlsbad, NM 88220		

Location of Release Source

Latitude 32.253020° Longitude -103.922969°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Poker Lake Unit #263H	Site Type	Production Well Facility flow line
Date Release Discovered	5/5/2019	API# (if applicable)	30-015-35115

Unit Letter	Section	Township	Range	County
C	6	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)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	1.20	Volume Recovered (bbls)	1.15
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	4.01	Volume Recovered (bbls)	3.85
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release

Fluids were released to the lease road when a hole developed in a steel buried flow line due to corrosion. The line was clamped until it could be repaired. A vacuum truck recovered free fluids and the well was returned to production. Additional third party resources have been retained to assist with remediation.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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: 5/17/2019

email: Kyle.Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: 

Date: 5/23/2019

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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?	<u> >100 </u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. <input checked="" type="checkbox"/> Field data <input checked="" type="checkbox"/> Data table of soil contaminant concentration data <input checked="" type="checkbox"/> Depth to water determination <input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release <input checked="" type="checkbox"/> Boring or excavation logs <input checked="" type="checkbox"/> Photographs including date and GIS information <input checked="" type="checkbox"/> Topographic/Aerial maps <input checked="" type="checkbox"/> 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.

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State of New Mexico
Oil Conservation Division

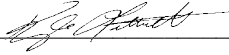
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform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

Printed Name: _____ Kyle Littrell _____

Title: _____ SH&E Supervisor _____

Signature: _____  _____

Date: _____ 09/23/2019 _____

email: _____ Kyle_Littrell@xtoenergy.com _____

Telephone: _____ 432-221-7331 _____

OCD Only

Received by: _____

Date: _____

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Oil Conservation Division

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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: _____

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 4, 2019

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

**RE: Closure Request - Addendum
Poker Lake Unit #263H
Remediation Permit Number 2RP-5442
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to the initial Closure Request dated September 26, 2019. This addendum details additional confirmation soil sampling activities for remediation of soil at the Poker Lake Unit #263H (Site) located in Unit C, Section 6, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). Based on the remediation activities and results of the final soil confirmation sampling event, XTO is requesting no further action for this release.

BACKGROUND

On August 1, 2019, LTE submitted a Deferral Request to the New Mexico Oil Conservation Division (NMOCD) for impacted soil from a May 5, 2019, produced water and crude oil release associated with a corroded buried steel flow line on the active lease road adjacent to the Site. The Remediation Permit (RP) Number is 2RP-5442. The deferral was submitted after collecting preliminary and delineation soil samples within and around the release extent of impacted soil.

On August 2, 2019, the NMOCD denied deferral, following the Bureau of Land Management (BLM) recommendation to have blade and water truck work conducted on the road based upon the minimal loss of fluids during the release. Upon completion of blading and watering the lease road, LTE collected three additional discrete soil samples (SS04 through SS06) from a depth of approximately 0.5 feet bgs within the affected area on September 6, 2019. Soil samples SS04 through SS06 exhibited chloride concentrations ranged from 606 milligrams per kilogram (mg/kg) to 677 mg/kg. On November 7, 2019, NMOCD denied closure due to the low-level chloride exceedances reported during the additional sampling.



Bratcher, M.
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ADDITIONAL SITE ACTIVITIES

LTE conducted confirmation sampling on November 12, 2019, to confirm the chloride exceedances previously reported had been fully remediated. LTE collected three 5-point composite confirmation floor samples (FS01 through FS03) from a depth of approximately 0.5 feet bgs within the affected area of the lease road (Figure 2 and Table 1).

The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, re-sealable plastic bag and homogenizing the samples by thorough mixing. Samples were then placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by the United States Environmental Protection Agency (EPA) Method 8021B, total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by EPA Method 8015M/D, and chloride by EPA Method 300.0.

SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated that confirmation floor samples FS01 through FS03 were compliant with the NMOCD Table 1 Closure Criteria (Closure Criteria) for benzene, BTEX, and TPH. Confirmation soil samples FS01 through FS03 chloride concentrations ranged from 118 mg/kg to 425 mg/kg. Benzene, BTEX, and TPH concentrations were also below Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CLOSURE REQUEST

Laboratory analytical results for the confirmation soil samples, collected from the lease road after blading and watering activities, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. The affected area is on a heavily-trafficked lease road, that does not need to be conducive to vegetation growth; therefore, no further remedial activities are warranted. Additionally, delineation soil sampling was completed in the area around the release extent. Laboratory analytical results for the July 2019 delineation soil samples indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria.

Initial response efforts and remedial activities have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5442. An updated NMOCD Form C-141 is included as Attachment 1.





Bratcher, M.
Page 3

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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads "Kevin M. Axe".

Kevin M. Axe, P.G.
Senior Geologist

A handwritten signature in black ink that reads "Ashley L. Ager".

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

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

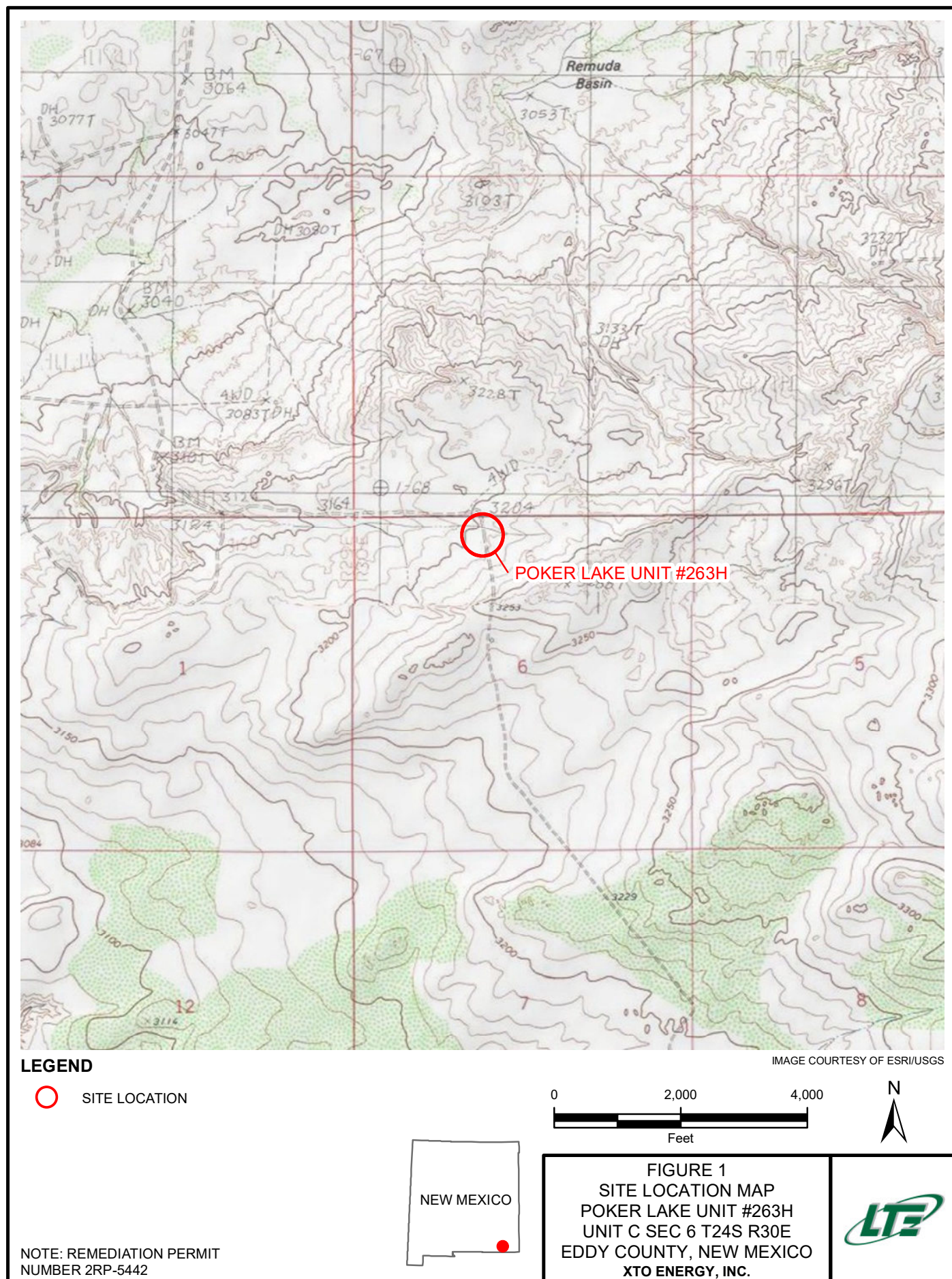
Attachments:

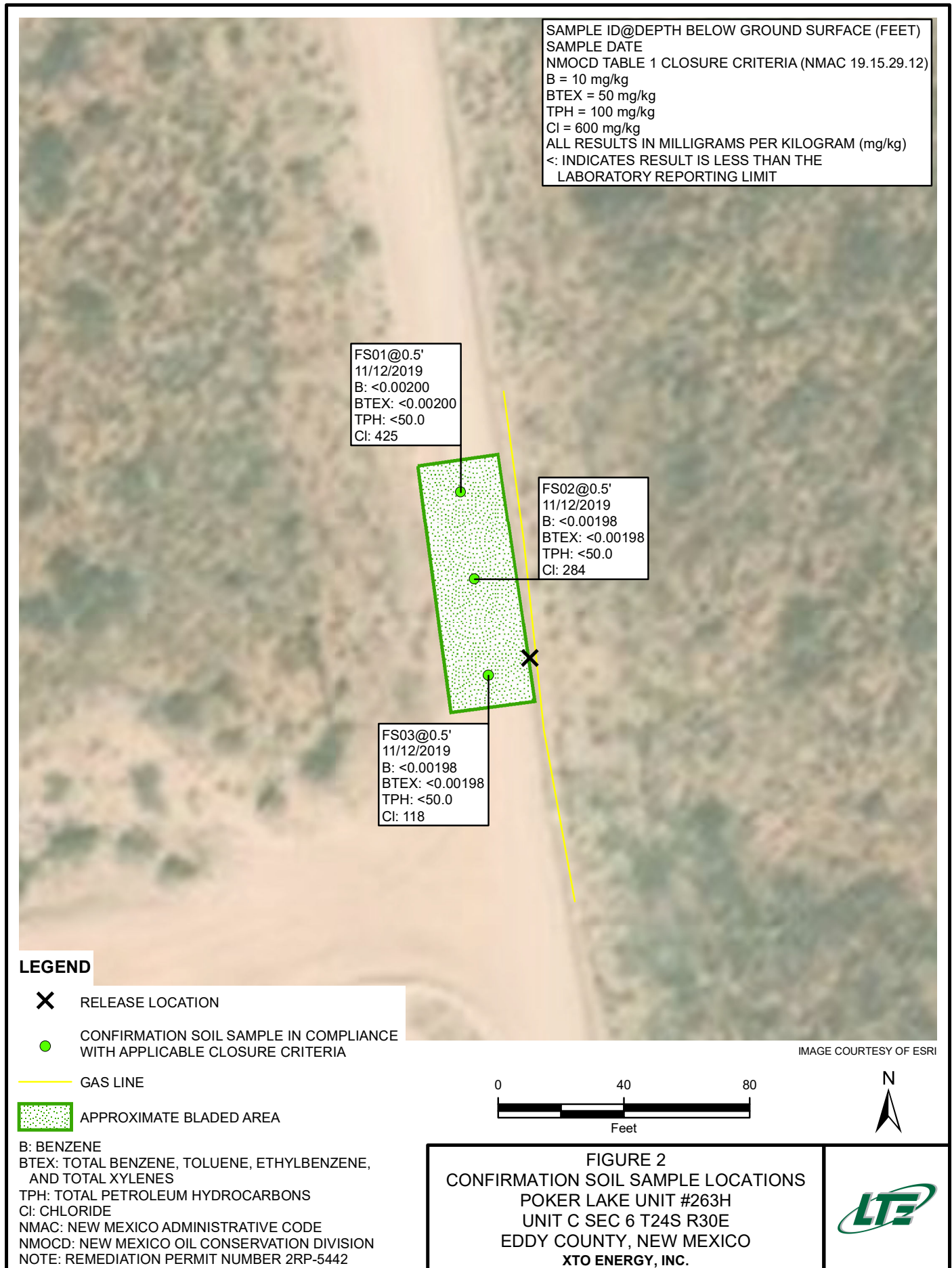
Figure 1 Site Location Map
Figure 2 Confirmation Soil Sample Locations
Table 1 Laboratory Analytical Reports
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5442)
Attachment 2 Soil Analytical Results



FIGURES







TABLE



TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #263H
REMEDATION PERMIT NUMBER 2RP-5442
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	05/07/2019	<0.00200	0.0209	0.0435	0.232	0.296	89.6	797	126	887	1,010	6,390
SS02	0.5	05/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	17.4	633	105	650	755	6,230
SS03	0.5	05/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	18.9	<15.0	18.9	18.9	5,640
SS04	0.5	09/06/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	677
SS05	0.5	09/06/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	643
SS06	0.5	09/06/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<24.9	<24.9	<24.9	<24.9	<24.9	606
BH01	1	07/09/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	18.1
BH01A	4	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	11.6
BH02	1	07/09/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	17.4	<15.0	<15.0	17.4	17.4	21.5
BH02A	4	07/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	109
BH03	1	07/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	33.3
BH03A	4	07/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	5.30
BH04	1	07/09/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	22.7
BH04A	4	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	15.6
FS01	0.5	11/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	425
FS02	0.5	11/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	284
FS03	0.5	11/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	118
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

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-5442)

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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Contact mailing address	522 W. Mermod, Carlsbad, NM 88220		

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(NAD 83 in decimal degrees to 5 decimal places)

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Date Release Discovered	5/5/2019	API# (if applicable)	30-015-35115

Unit Letter	Section	Township	Range	County
C	6	24S	30E	Eddy

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

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

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<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	4.01	Volume Recovered (bbls)	3.85
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release

Fluids were released to the lease road when a hole developed in a steel buried flow line due to corrosion. The line was clamped until it could be repaired. A vacuum truck recovered free fluids and the well was returned to production. Additional third party resources have been retained to assist with remediation.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

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- ☒ 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.

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Printed Name: Kyle Littrell

Title: SH&E Supervisor


Signature: 

Date: 5/17/2019

email: Kyle.Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: 

Date: 5/23/2019

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5442
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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?	<u> >100 </u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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

State of New Mexico
Oil Conservation Division

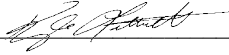
Page 4

Incident ID	
District RP	2RP-5442
Facility ID	
Application ID	

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

Printed Name: _____ Kyle Littrell _____

Title: _____ SH&E Supervisor _____

Signature: _____  _____

Date: _____ 09/23/2019 _____

email: _____ Kyle_Littrell@xtoenergy.com _____

Telephone: _____ 432-221-7331 _____

OCD Only

Received by: _____

Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	
District RP	2RP-5442
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E SupervisorSignature:  Date: _____email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331**OCD Only**

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: SOIL ANALYTICAL RESULTS



Analytical Report 643015

**for
LT Environmental, Inc.**

Project Manager: Dan Moir

PLU 263

012919094

14-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)



14-NOV-19

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

Reference: XENCO Report No(s): **643015**
PLU 263
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) 643015. 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. 643015 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

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 643015****LT Environmental, Inc., Arvada, CO**

PLU 263

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11-12-19 14:40	0.5 ft	643015-001
FS02	S	11-12-19 14:50	0.5 ft	643015-002
FS03	S	11-12-19 15:00	0.5 ft	643015-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 263

Project ID: 012919094

Work Order Number(s): 643015

Report Date: 14-NOV-19

Date Received: 11/13/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107440 BTEX by EPA 8021B

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



Certificate of Analysis Summary 643015

LT Environmental, Inc., Arvada, CO

Project Name: PLU 263

Project Id: 012919094
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Nov-13-19 10:44 am

Report Date: 14-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	643015-001	643015-002	643015-003			
	<i>Field Id:</i>	FS01	FS02	FS03			
	<i>Depth:</i>	0.5- ft	0.5- ft	0.5- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Nov-12-19 14:40	Nov-12-19 14:50	Nov-12-19 15:00			
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Nov-13-19 15:00	Nov-13-19 15:00	Nov-13-19 15:00			
	<i>Analyzed:</i>	Nov-14-19 01:52	Nov-14-19 02:12	Nov-14-19 02:32			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
m,p-Xylenes		<0.00400 0.00400	<0.00397 0.00397	<0.00397 0.00397			
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198			
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Nov-13-19 16:30	Nov-13-19 16:30	Nov-13-19 16:30			
	<i>Analyzed:</i>	Nov-13-19 21:01	Nov-13-19 21:07	Nov-13-19 21:27			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		425 25.1	284 25.0	118 4.97			
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Nov-13-19 16:00	Nov-13-19 16:00	Nov-13-19 16:00			
	<i>Analyzed:</i>	Nov-14-19 03:30	Nov-14-19 04:34	Nov-14-19 04:55			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<50.0 50.0			
Total TPH		<50.0 50.0	<50.0 50.0	<50.0 50.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: FS01	Matrix: Soil	Date Received: 11.13.19 10.44
Lab Sample Id: 643015-001	Date Collected: 11.12.19 14.40	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 11.13.19 16.30	Basis: Wet Weight
Seq Number: 3107408		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	425	25.1	mg/kg	11.13.19 21.01		5

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3107399	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 03.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 03.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 03.30	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 03.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 03.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.14.19 03.30	
o-Terphenyl	84-15-1	107	%	70-135	11.14.19 03.30	



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: FS01	Matrix: Soil	Date Received: 11.13.19 10.44
Lab Sample Id: 643015-001	Date Collected: 11.12.19 14.40	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 11.13.19 15.00	Basis: Wet Weight
Seq Number: 3107440		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.14.19 01.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.19 01.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	11.14.19 01.52		
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.14.19 01.52		



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: **FS02** Matrix: Soil Date Received: 11.13.19 10.44
 Lab Sample Id: 643015-002 Date Collected: 11.12.19 14.50 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 11.13.19 16.30 Basis: Wet Weight
 Seq Number: 3107408 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	284	25.0	mg/kg	11.13.19 21.07		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 11.13.19 16.00 Basis: Wet Weight
 Seq Number: 3107399 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 04.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 04.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 04.34	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 04.34	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 04.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	11.14.19 04.34	
o-Terphenyl	84-15-1	111	%	70-135	11.14.19 04.34	



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: FS02	Matrix: Soil	Date Received: 11.13.19 10.44
Lab Sample Id: 643015-002	Date Collected: 11.12.19 14.50	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 11.13.19 15.00	Basis: Wet Weight
Seq Number: 3107440		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.14.19 02.12	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.14.19 02.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	11.14.19 02.12		
1,4-Difluorobenzene	540-36-3	97	%	70-130	11.14.19 02.12		



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: FS03	Matrix: Soil	Date Received: 11.13.19 10.44
Lab Sample Id: 643015-003	Date Collected: 11.12.19 15.00	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 11.13.19 16.30	Basis: Wet Weight
Seq Number: 3107408		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	118	4.97	mg/kg	11.13.19 21.27		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3107399	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 04.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	11.14.19 04.55	
o-Terphenyl	84-15-1	109	%	70-135	11.14.19 04.55	



Certificate of Analytical Results 643015

LT Environmental, Inc., Arvada, CO

PLU 263

Sample Id: FS03	Matrix: Soil	Date Received: 11.13.19 10.44
Lab Sample Id: 643015-003	Date Collected: 11.12.19 15.00	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 11.13.19 15.00	Basis: Wet Weight
Seq Number: 3107440		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.14.19 02.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.14.19 02.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	11.14.19 02.32		
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.14.19 02.32		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** 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 643015

LT Environmental, Inc.

PLU 263

Analytical Method: Chloride by EPA 300

Seq Number: 3107408

MB Sample Id: 7690275-1-BLK

Matrix: Solid

LCS Sample Id: 7690275-1-BKS

Prep Method: E300P

Date Prep: 11.13.19

LCSD Sample Id: 7690275-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	248	99	248	99	90-110	0	20	mg/kg	11.13.19 18:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3107408

Parent Sample Id: 642023-007

Matrix: Soil

MS Sample Id: 642023-007 S

Prep Method: E300P

Date Prep: 11.13.19

MSD Sample Id: 642023-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	320	252	570	99	567	98	90-110	1	20	mg/kg	11.13.19 19:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3107408

Parent Sample Id: 642973-005

Matrix: Soil

MS Sample Id: 642973-005 S

Prep Method: E300P

Date Prep: 11.13.19

MSD Sample Id: 642973-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	107	396	516	103	516	103	90-110	0	20	mg/kg	11.13.19 20:47	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3107399

MB Sample Id: 7690274-1-BLK

Matrix: Solid

LCS Sample Id: 7690274-1-BKS

Prep Method: SW8015P

Date Prep: 11.13.19

LCSD Sample Id: 7690274-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1150	115	1190	119	70-135	3	20	mg/kg	11.14.19 02:48	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	1150	115	70-135	4	20	mg/kg	11.14.19 02:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		116		121		70-135	%	11.14.19 02:48
o-Terphenyl	105		104		109		70-135	%	11.14.19 02:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3107399

Matrix: Solid
MB Sample Id: 7690274-1-BLK

Prep Method: SW8015P

Date Prep: 11.13.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.14.19 02:27	

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

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

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

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



QC Summary 643015

LT Environmental, Inc.

PLU 263

Analytical Method: TPH by SW8015 Mod

Seq Number: 3107399

Parent Sample Id: 643015-001

Matrix: Soil

MS Sample Id: 643015-001 S

Prep Method: SW8015P

Date Prep: 11.13.19

MSD Sample Id: 643015-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1180	118	1200	120	70-135	2	20	mg/kg	11.14.19 03:51	
Diesel Range Organics (DRO)	21.2	997	1190	117	1170	115	70-135	2	20	mg/kg	11.14.19 03:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		128		70-135	%	11.14.19 03:51
o-Terphenyl	112		113		70-135	%	11.14.19 03:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3107440

MB Sample Id: 7690267-1-BLK

Matrix: Solid

LCS Sample Id: 7690267-1-BKS

Prep Method: SW5030B

Date Prep: 11.13.19

LCSD Sample Id: 7690267-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0974	97	0.106	106	70-130	8	35	mg/kg	11.13.19 22:51	
Toluene	<0.00200	0.100	0.103	103	0.111	111	70-130	7	35	mg/kg	11.13.19 22:51	
Ethylbenzene	<0.00200	0.100	0.104	104	0.112	112	70-130	7	35	mg/kg	11.13.19 22:51	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.198	99	70-130	8	35	mg/kg	11.13.19 22:51	
o-Xylene	<0.00200	0.100	0.104	104	0.113	113	70-130	8	35	mg/kg	11.13.19 22:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		95		101		70-130	%	11.13.19 22:51
4-Bromofluorobenzene	88		98		109		70-130	%	11.13.19 22:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3107440

Parent Sample Id: 642593-001

Matrix: Soil

MS Sample Id: 642593-001 S

Prep Method: SW5030B

Date Prep: 11.13.19

MSD Sample Id: 642593-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0917	92	0.0971	97	70-130	6	35	mg/kg	11.13.19 23:32	
Toluene	<0.00200	0.100	0.0995	100	0.101	101	70-130	1	35	mg/kg	11.13.19 23:32	
Ethylbenzene	<0.00200	0.100	0.0939	94	0.101	101	70-130	7	35	mg/kg	11.13.19 23:32	
m,p-Xylenes	<0.00401	0.200	0.172	86	0.178	89	70-130	3	35	mg/kg	11.13.19 23:32	
o-Xylene	<0.00200	0.100	0.0966	97	0.0995	100	70-130	3	35	mg/kg	11.13.19 23:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		94		70-130	%	11.13.19 23:32
4-Bromofluorobenzene	105		106		70-130	%	11.13.19 23:32

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

Revised Date 051418 Rev. 2018.



Inter-Office Shipment

Page 1 of 1

IOS Number **52140**

Date/Time: 11/13/19 12:02

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
643015-001	S	FS01	11/12/19 14:40	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	
643015-001	S	FS01	11/12/19 14:40	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643015-001	S	FS01	11/12/19 14:40	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643015-002	S	FS02	11/12/19 14:50	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643015-002	S	FS02	11/12/19 14:50	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643015-002	S	FS02	11/12/19 14:50	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	
643015-003	S	FS03	11/12/19 15:00	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643015-003	S	FS03	11/12/19 15:00	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643015-003	S	FS03	11/12/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 11/13/2019

Received By:

Brianna Teel

Date Received: 11/13/2019 15:59

Cooler Temperature: 0.6



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 52140

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 11/13/2019 12:02 PM

Received By: Brianna Teel

Date Received: 11/13/2019 03:59 PM

Sample Receipt Checklist

Comments

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 11/13/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 11/13/2019 10:44:00 AM

Work Order #: 643015

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#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 Samples split into 2oz. jars for subbing.
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Subbed to Midland.
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 11/13/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/14/2019