



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

January 22, 2018

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Drive, #3
Santa Fe, New Mexico 87505

**RE: Closure Request
Poker Lake Unit #78 SWD
Remediation Permit Number 2RP-4825
Eddy County, New Mexico**

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing soil sampling activities at the Poker Lake Unit (PLU) #78 Saltwater Disposal well (SWD) (API 30-015-27536) (Site) in Unit A, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to address impacts to soil after a release of produced water and oil within the lined bermed containment area of the well pad.

On June 4, 2018, an operator responded to a high-level skim tank alarm. The skim tank overflowed due to a malfunction in the water leg. The operator shut off the incoming flow to the facility until repairs could be made. The release was mostly contained in the lined containment, but a small volume of spray affected a portion of the caliche well pad. Free-standing fluids were recovered from the containment. The release was approximately 390 barrels (bbls) of produced water and 90 bbls of oil inside the lined containment around the process equipment. All of the released produced water and oil were recovered. Less than ½ gallon each of produced water and oil sprayed outside of the containment and was not recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on June 19, 2018, and was assigned Remediation Permit (RP) Number 2RP-4825 on June 22, 2018 (Attachment 1).

BACKGROUND

The source of the release was at latitude 32.193934 degrees (°) and longitude -103.828252°. The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier II site in the Compliance Agreement, meaning





Billings, B.
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remediation of the release began prior to August 14, 2018, the effective date of 19.15.29 NMAC, but a closure report had not yet been submitted. Based on the results of the soil sampling events, XTO is submitting this closure report and requesting no further action for this release event.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 02110, located approximately 1.5 miles northwest of the Site. Ground surface elevation at the well location is approximately 3,404 feet, which is 147 feet lower in elevation than the Site. The water well has a depth to groundwater of 400 feet and a total depth of 600 feet. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 10,439 feet northwest 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.

Based on these criteria, the following NMOCD Table 1 Closure Criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

SOIL SAMPLING

On October 15, 2018, an LTE scientist collected four initial soil samples to assess the lateral extent of impacted soil in the release area. The soil sample locations were selected based on information provided on the initial Form C-141 and field observations of stained soil (Figure 2). To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples (SS01 through SS04) were collected at approximately 0.5 feet bgs.

On October 22, 2018, LTE personnel returned to the Site assess the vertical extent of impacted soil in the release area. Soil samples SS01 through SS04 were collected at 2 feet bgs from hand-auger soil borings located at the initial soil sampling locations. Soil sampling logs are included as Attachment 2. The final sampling locations are illustrated on Figure 2.

The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.



Billings, B.
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ANALYTICAL RESULTS

Laboratory analytical results indicated soil samples SS01 through SS04 at 0.5 feet and at 2 feet bgs were compliant with the NMOCD Table 1 Closure Criteria. The laboratory analytical results are depicted on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are presented in Attachment 3.

CONCLUSIONS

Laboratory analytical results for eight soil samples indicated that BTEX, TPH, and chloride concentrations were compliant with NMOCD Table 1 Closure Criteria. Based on soil sampling results, no remediation was conducted, except for site characterization. XTO requests no further action for RP number 2RP-4825. An updated NMOCD Form C-141 is included in Attachment 1. A photographic log of field activities is presented as Attachment 4.

If you have any questions or comments, please do not hesitate to contact Ms. Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Adrian Baker'.

Adrian Baker
Project Geologist

A handwritten signature in blue ink that reads 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Deborah McKinney, U.S. Bureau of Land Management
Michael Bratcher, NMOCD
Jim Amos, U.S. Bureau of Land Management

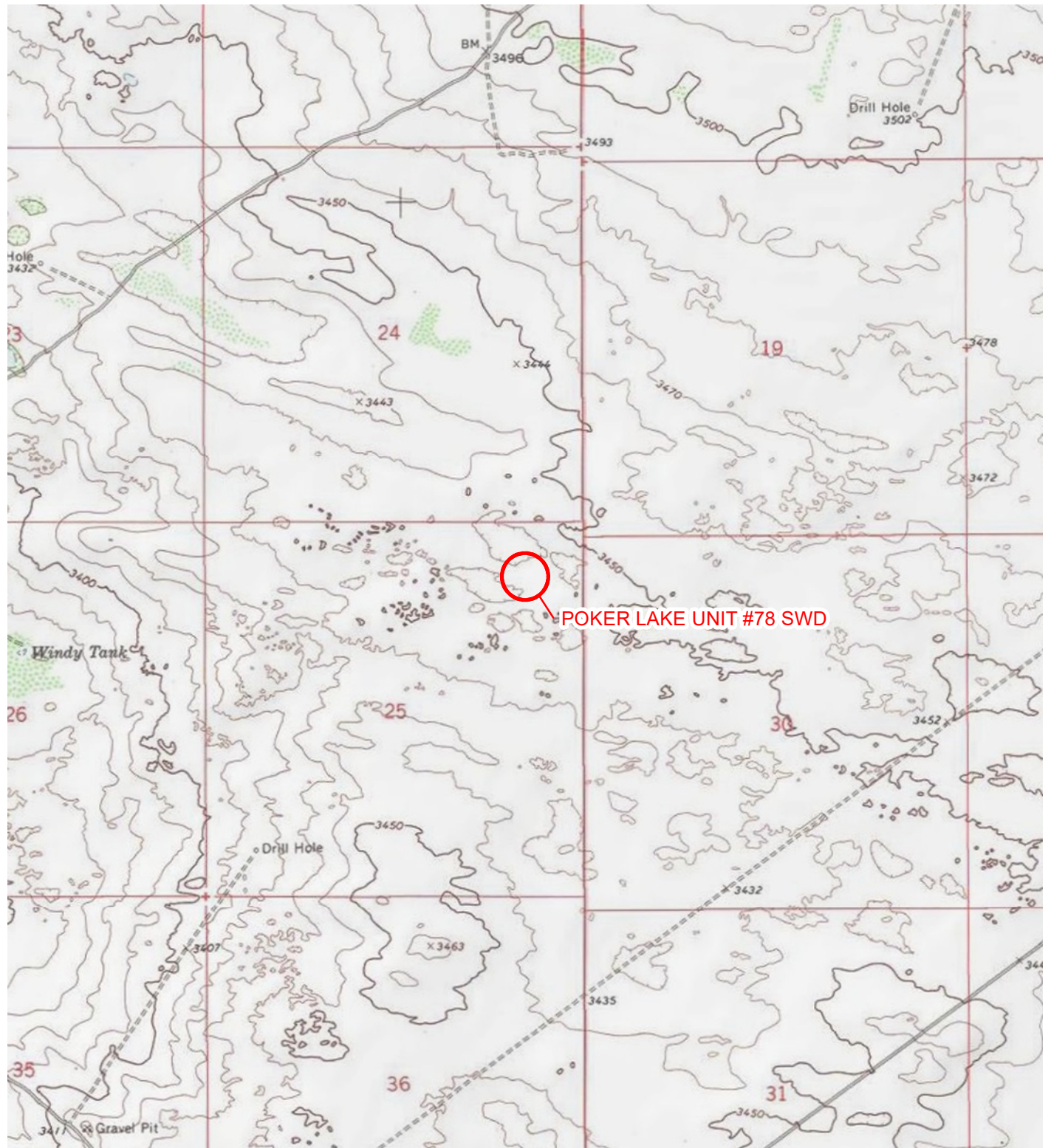
Attachments:

Figure 1 Site Location Map
Figure 2 Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-4825)
Attachment 2 Soil Sampling Logs
Attachment 3 Laboratory Analytical Reports
Attachment 4 Photographic Log



FIGURES



**LEGEND**


 SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000
Feet



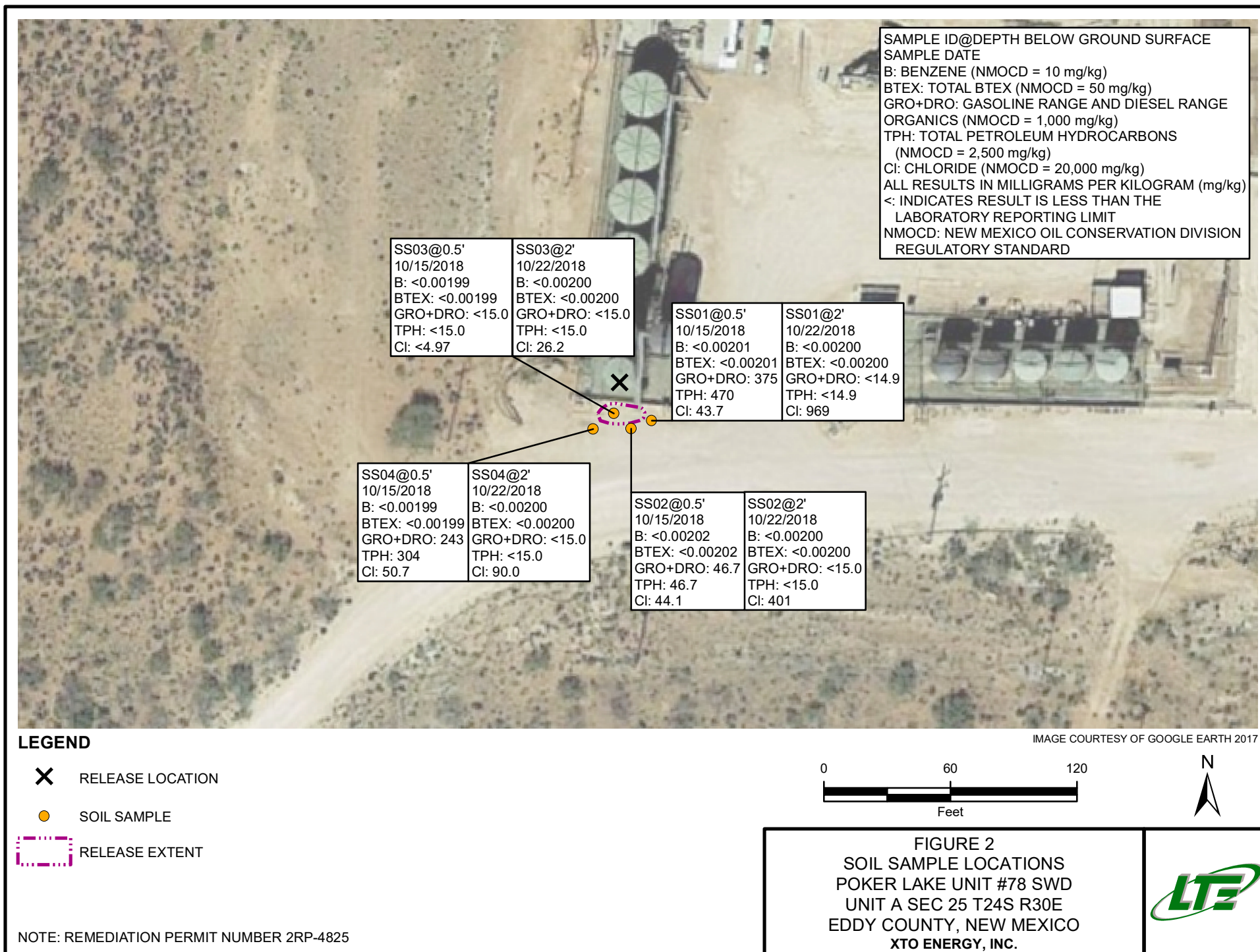
NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-4825

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT #78 SWD
UNIT A SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012918131_POKER LAKE UNIT #78 SWD\012918131_FIG01_SL_2018_4825.mxd



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS
POKER LAKE UNIT #78 SWD
REMEDATION PERMIT NUMBER 2RP-4825
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/15/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	375	94.5	375	470	43.7
SS02	0.5	10/15/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	46.7	<15.0	46.7	46.7	44.1
SS03	0.5	10/15/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS04	0.5	10/15/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	243	61.0	243	304	50.7
SS01	2	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	969
SS02	2	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	401
SS03	2	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.2
SS04	2	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	90.0

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

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard.

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

NMAC - New Mexico Administrative Code



ATTACHMENT 1: INITIAL/FINAL NMOC FORM C-141 (2RP-4825)



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

JUN 19 2018

Form C-141
Revised April 3, 2017

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

DISTRICT IV ARTESIA, NM
Appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

Operator ☒ Initial Report ☐ Final Report

Name of Company: XTO Energy **CONTACT** Amy C. Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 **Telephone No:** 575-689-3380
Facility Name: Poker Lake Unit #78 SWD (API for PLU #78) **Facility Type:** Exploration and Production

Surface Owner: Federal **Mineral Owner:** Federal **API No:** 30-015-27536

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E	790	North	800	East	Eddy

Latitude 32.193934° Longitude -103.828252° NAD83

NATURE OF RELEASE

Type of Release	Produced Water and Crude Oil	Volume of Release	390 bbls, < 1/2 gallon PW, and 90 bbls, < 1/2 gallon Oil	Volume Recovered	390 BPW 90 BO
Source of Release	Skim Tank	Date and Hour of Occurrence	6/4/2018 time unknown	Date and Hour of Discovery	6/4/2018 2 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)		
By Whom?	Kyle Littrell	Date and Hour:	6/5/2018 1:08 pm by email		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.*
N/A


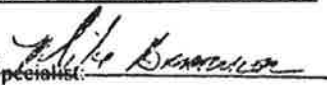
Describe Cause of Problem and Remedial Action Taken.*

SWD operator responded to a high level skim tank alarm. Skim tank overflowed due to malfunction in the water leg. Operator shut off incoming flow to facility until repairs could be made.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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 release affected the lined containment and a small area of spray on the caliche well pad. Free standing fluids were recovered from the containment. An environmental contractor will be retained to assist with remediation efforts.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth		Approved by Environmental Specialist: 	
Title: Environmental Coordinator		Approval Date: 6/22/18	Expiration Date: N/A
E-mail Address: Amy.Ruth@xtoenergy.com		Conditions of Approval: See Attached	
Date: 6/19/2018 Phone: 575-689-3380		Attached: FRP-4825	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-4825
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4825
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.193934 Longitude -103.828252
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit #78 SWD	Site Type Exploration and Production
Date Release Discovered 6/4/2018	API# (if applicable) 30-015-27536

Unit Letter	Section	Township	Range	County
A	25	24S	30E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 90 bbls and ½ gallon	Volume Recovered (bbls) 90
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 390 bbls and ½ gallon	Volume Recovered (bbls) 390
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" 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

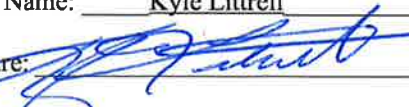
SWD operator responded to a high-level skim tank alarm. Skim tank overflowed due to malfunction in the water leg. Operator shut off incoming flow to facility until repairs could be made. The release affected the lined containment and a small area or spray on the caliche well pad. Free standing fluids were recovered from the containment.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Volume of released material: 390 bbls, < ½ gallon produced water; 90 bbls, <½ gallon crude oil.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Kyle Littrell notified Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM) on 6/5/2018 at 1:08 pm.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Coordinator</u>
Signature: 	Date: <u>1/25/2019</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

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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?	<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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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.

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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 Coordinator

/Signature:  Date: 1/25/2019

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

OCD Only

Received by: _____ Date: _____

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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). Site photographs show affected portions of caliche pad.
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature:  Date: 1/25/2019

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: Ashley Maxwell Date: 3/24/2023


Printed Name: Ashley Maxwell Title: Environmental Specialist


Closure of release approved. Incident will remain open as release area is subject to 19.15.29.13 NMAC and will need to be addressed during P&A activities.

ATTACHMENT 2: SOIL SAMPLING LOGS

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS01	Date: 10/22/2018					
		Project Name: Poker Lake Unit #78 SWD	RP Number: 2RP-4825					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: LL	Method:					
Lat/Long: 32.193934, -103.828252		Field Screening: Photo-ionizing detector	Hole Diameter: 4-inch					
Total Depth: 2								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	2.2	0.4		SS01@0.5'	0		SM	Sandy Loam, dark brown, fine sand, no odor, no stain
	5.0	0.5		SS01@2'	1			
					2			TD = 2 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS02	Date: 10/22/2018					
		Project Name: Poker Lake Unit #78 SWD	RP Number: 2RP-4825					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: LL	Method:					
Lat/Long: 32.193934, -103.828252		Field Screening: Photo-ionizing detector	Hole Diameter: 4-inch					
Total Depth: 2								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	2.4	0.4		SS02@0.5'	0		SM	Sandy Loam, dark brown, fine sand, no odor, no stain
	2.0	0.5		SS02@2'	1			
					2			TD = 2 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 <p>LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation</p>		Identifier: SS03	Date: 10/22/2018					
		Project Name: Poker Lake Unit #78 SWD	RP Number: 2RP-4825					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: LL	Method:					
Lat/Long: 32.193934, -103.828252		Field Screening: Photo-ionizing detector	Hole Diameter: 4-inch					
Total Depth: 2								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	1.2	1.8		SS03@0.5'	0		SM	Sandy Loam, dark brown, fine sand, no odor, no stain
	1.2	1.1		SS03@2'	1			
					2			TD = 2 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: SS04	Date: 10/22/2018					
		Project Name: Poker Lake Unit #78 SWD	RP Number: 2RP-4825					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: LL	Method:					
Lat/Long: 32.193934, -103.828252		Field Screening: Photo-ionizing detector	Hole Diameter: 4-inch					
Total Depth: 2								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	3.4	1.3		SS04@0.5'	0		SM	Sandy Loam, dark brown, fine sand, no odor, no stain
	2.2	1.8		SS04@2'	1			
					2			TD = 2 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



Analytical Report 602570

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 78

PLU 78

23-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



23-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602570**

PLU 78

Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 602570. 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. 602570 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'.

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 602570****LT Environmental, Inc., Arvada, CO**

PLU 78

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-15-18 11:30	.5 ft	602570-001
SS02	S	10-15-18 11:45	.5 ft	602570-002
SS03	S	10-15-18 12:05	.5 ft	602570-003
SS04	S	10-15-18 12:30	.5 ft	602570-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 78*

Project ID: *PLU 78*
Work Order Number(s): *602570*

Report Date: *23-OCT-18*
Date Received: *10/17/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066898 BTEX by EPA 8021B

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



Certificate of Analysis Summary 602570

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78



Project Id: PLU 78
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Oct-17-18 10:50 am
Report Date: 23-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602570-001	602570-002	602570-003	602570-004		
	<i>Field Id:</i>	SS01	SS02	SS03	SS04		
	<i>Depth:</i>	.5- ft	.5- ft	.5- ft	.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-15-18 11:30	Oct-15-18 11:45	Oct-15-18 12:05	Oct-15-18 12:30		
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-18-18 16:00	Oct-18-18 16:00	Oct-18-18 16:00	Oct-18-18 16:00		
	<i>Analyzed:</i>	Oct-19-18 03:27	Oct-19-18 02:45	Oct-19-18 03:06	Oct-19-18 03:49		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
m,p-Xylenes		<0.00402 0.00402	<0.00404 0.00404	<0.00398 0.00398	<0.00398 0.00398		
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
Total Xylenes		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30		
	<i>Analyzed:</i>	Oct-22-18 10:46	Oct-22-18 10:51	Oct-22-18 10:56	Oct-22-18 11:12		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		43.7 4.97	44.1 4.99	<4.97 4.97	50.7 4.97		
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00		
	<i>Analyzed:</i>	Oct-18-18 02:35	Oct-18-18 02:54	Oct-18-18 03:12	Oct-18-18 03:30		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Diesel Range Organics (DRO)		375 15.0	46.7 15.0	<15.0 15.0	243 15.0		
Motor Oil Range Hydrocarbons (MRO)		94.5 15.0	<15.0 15.0	<15.0 15.0	61.0 15.0		
Total TPH		470 15.0	46.7 15.0	<15.0 15.0	304 15.0		

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 - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 602570



LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: **SS01**
 Lab Sample Id: 602570-001

Matrix: Soil
 Date Collected: 10.15.18 11.30

Date Received: 10.17.18 10.50
 Sample Depth: .5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 10.20.18 16.30

Basis: Wet Weight

Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.7	4.97	mg/kg	10.22.18 10.46		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 10.17.18 17.00

Basis: Wet Weight

Seq Number: 3066699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 02.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	375	15.0	mg/kg	10.18.18 02.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	94.5	15.0	mg/kg	10.18.18 02.35		1
Total TPH	PHC635	470	15.0	mg/kg	10.18.18 02.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	10.18.18 02.35	
o-Terphenyl	84-15-1	119	%	70-135	10.18.18 02.35	



Certificate of Analytical Results 602570

LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: **SS01**
 Lab Sample Id: 602570-001

Matrix: Soil
 Date Collected: 10.15.18 11.30

Date Received: 10.17.18 10.50
 Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.18.18 16.00

Basis: Wet Weight

Seq Number: 3066898

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.19.18 03.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.19.18 03.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.19.18 03.27		
1,4-Difluorobenzene	540-36-3	118	%	70-130	10.19.18 03.27		



Certificate of Analytical Results 602570



LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: SS02
Lab Sample Id: 602570-002

Matrix: Soil
Date Collected: 10.15.18 11.45

Date Received: 10.17.18 10.50
Sample Depth: .5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.1	4.99	mg/kg	10.22.18 10.51		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 02.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	46.7	15.0	mg/kg	10.18.18 02.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 02.54	U	1
Total TPH	PHC635	46.7	15.0	mg/kg	10.18.18 02.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.18.18 02.54	
o-Terphenyl	84-15-1	98	%	70-135	10.18.18 02.54	



Certificate of Analytical Results 602570



LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: **SS02**
Lab Sample Id: 602570-002

Matrix: Soil
Date Collected: 10.15.18 11.45

Date Received: 10.17.18 10.50
Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.18.18 16.00

Basis: Wet Weight

Seq Number: 3066898

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.19.18 02.45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.19.18 02.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.19.18 02.45		
1,4-Difluorobenzene	540-36-3	115	%	70-130	10.19.18 02.45		



Certificate of Analytical Results 602570



LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: SS03
Lab Sample Id: 602570-003

Matrix: Soil
Date Collected: 10.15.18 12.05

Date Received: 10.17.18 10.50
Sample Depth: .5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	10.22.18 10.56	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 03.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 03.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 03.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.18.18 03.12	
o-Terphenyl	84-15-1	97	%	70-135	10.18.18 03.12	



Certificate of Analytical Results 602570



LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: SS03
Lab Sample Id: 602570-003

Matrix: Soil
Date Collected: 10.15.18 12.05

Date Received: 10.17.18 10.50
Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.18.18 16.00

Basis: Wet Weight

Seq Number: 3066898

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.18 03.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.18 03.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	10.19.18 03.06		
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.19.18 03.06		



Certificate of Analytical Results 602570

LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: **SS04**
 Lab Sample Id: 602570-004

Matrix: Soil
 Date Collected: 10.15.18 12.30

Date Received: 10.17.18 10.50
 Sample Depth: .5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.7	4.97	mg/kg	10.22.18 11.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 03.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	243	15.0	mg/kg	10.18.18 03.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	61.0	15.0	mg/kg	10.18.18 03.30		1
Total TPH	PHC635	304	15.0	mg/kg	10.18.18 03.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.18.18 03.30	
o-Terphenyl	84-15-1	98	%	70-135	10.18.18 03.30	



Certificate of Analytical Results 602570

LT Environmental, Inc., Arvada, CO

PLU 78

Sample Id: **SS04**
 Lab Sample Id: 602570-004

Matrix: Soil
 Date Collected: 10.15.18 12.30

Date Received: 10.17.18 10.50
 Sample Depth: .5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.18.18 16.00

Basis: Wet Weight

Seq Number: 3066898

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.18 03.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.18 03.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	10.19.18 03.49		
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.19.18 03.49		



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



LT Environmental, Inc.

PLU 78

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

MB Sample Id: 7664563-1-BLK

Matrix: Solid

LCS Sample Id: 7664563-1-BKS

Prep Method: E300P

Date Prep: 10.20.18

LCSD Sample Id: 7664563-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	275	110	90-110	0	20	mg/kg	10.22.18 09:32	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Parent Sample Id: 602357-002

Matrix: Soil

MS Sample Id: 602357-002 S

Prep Method: E300P

Date Prep: 10.20.18

MSD Sample Id: 602357-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	221	249	531	124	531	124	90-110	0	20	mg/kg	10.22.18 09:48	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Parent Sample Id: 602570-003

Matrix: Soil

MS Sample Id: 602570-003 S

Prep Method: E300P

Date Prep: 10.20.18

MSD Sample Id: 602570-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.853	249	271	109	270	108	90-110	0	20	mg/kg	10.22.18 11:02	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066699

MB Sample Id: 7664343-1-BLK

Matrix: Solid

LCS Sample Id: 7664343-1-BKS

Prep Method: TX1005P

Date Prep: 10.17.18

LCSD Sample Id: 7664343-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	941	94	1020	102	70-135	8	20	mg/kg	10.17.18 20:29	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1080	108	70-135	0	20	mg/kg	10.17.18 20:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		127		126		70-135	%	10.17.18 20:29
o-Terphenyl	112		102		110		70-135	%	10.17.18 20:29

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



LT Environmental, Inc.

PLU 78

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066699

Parent Sample Id: 602462-001

Matrix: Soil

MS Sample Id: 602462-001 S

Prep Method: TX1005P

Date Prep: 10.17.18

MSD Sample Id: 602462-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	984	98	986	99	70-135	0	20	mg/kg	10.17.18 21:24	
Diesel Range Organics (DRO)	13.6	999	1080	107	1050	104	70-135	3	20	mg/kg	10.17.18 21:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		120		70-135	%	10.17.18 21:24
o-Terphenyl	112		104		70-135	%	10.17.18 21:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066898

MB Sample Id: 7664468-1-BLK

Matrix: Solid

LCS Sample Id: 7664468-1-BKS

Prep Method: SW5030B

Date Prep: 10.18.18

LCSD Sample Id: 7664468-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.120	120	0.120	120	70-130	0	35	mg/kg	10.18.18 23:53	
Toluene	<0.00200	0.0998	0.105	105	0.108	108	70-130	3	35	mg/kg	10.18.18 23:53	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.122	122	70-130	7	35	mg/kg	10.18.18 23:53	
m,p-Xylenes	<0.00399	0.200	0.236	118	0.247	124	70-130	5	35	mg/kg	10.18.18 23:53	
o-Xylene	<0.00200	0.0998	0.115	115	0.121	121	70-130	5	35	mg/kg	10.18.18 23:53	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		116		116		70-130	%	10.18.18 23:53
4-Bromofluorobenzene	101		123		127		70-130	%	10.18.18 23:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066898

Parent Sample Id: 602357-002

Matrix: Soil

MS Sample Id: 602357-002 S

Prep Method: SW5030B

Date Prep: 10.18.18

MSD Sample Id: 602357-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0827	83	0.107	106	70-130	26	35	mg/kg	10.19.18 00:35	
Toluene	<0.00201	0.100	0.0736	74	0.0872	86	70-130	17	35	mg/kg	10.19.18 00:35	
Ethylbenzene	<0.00201	0.100	0.0883	88	0.0927	92	70-130	5	35	mg/kg	10.19.18 00:35	
m,p-Xylenes	<0.00402	0.201	0.177	88	0.183	91	70-130	3	35	mg/kg	10.19.18 00:35	
o-Xylene	<0.00201	0.100	0.0840	84	0.0889	88	70-130	6	35	mg/kg	10.19.18 00:35	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		123		70-130	%	10.19.18 00:35
4-Bromofluorobenzene	118		129		70-130	%	10.19.18 00:35

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

Work Order No.:

102570

Page of

Work Order Comments

Program: UST/ST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRAP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

[illegible][illegible][illegible]

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Scott Green</i>	<i>Carl H. H. H.</i>	10/15/18 17:30	2 <i>Carl H. H. H.</i>	<i>Scott Green</i>	10/17 16:18 15:30
3			4		
5			6		

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 16OCT'18 ACTWGT: 26.00 LB CND: 10183706NET4040 DIMS: 26x14x12 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 INV. REF: PO. DEPT:	
 	
TRK# 7734 9299 9728 0201 41 MAFA TX-US LBB MAFA HLD	WED - 17 OCT HOLD STANDARD OVERNIGHT
	

552J1J88FB/DCA5

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Client: LT Environmental, Inc.

Date/ Time Received: 10/17/2018 10:50:00 AM

Work Order #: 602570

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 10/17/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/18/2018

Analytical Report 603505

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 78 SWD

012918147

26-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

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

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

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



26-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **603505**

PLU 78 SWD

Project Address: Eddy NM 2RP-4825

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 603505. 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. 603505 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'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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

**Sample Cross Reference 603505****LT Environmental, Inc., Arvada, CO**

PLU 78 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS04	S	10-22-18 11:05	2 ft	603505-001
SS03	S	10-22-18 11:15	2 ft	603505-002
SS02	S	10-22-18 11:25	2 ft	603505-003
SS01	S	10-22-18 11:55	2 ft	603505-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 78 SWD*

Project ID: 012918147

Work Order Number(s): 603505

Report Date: 26-OCT-18

Date Received: 10/25/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3067712 BTEX by EPA 8021B

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



Certificate of Analysis Summary 603505

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 SWD



Project Id: 012918147
Contact: Adrian Baker
Project Location: Eddy NM 2RP-4825

Date Received in Lab: Thu Oct-25-18 11:35 am
Report Date: 26-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	603505-001	603505-002	603505-003	603505-004		
	<i>Field Id:</i>	SS04	SS03	SS02	SS01		
	<i>Depth:</i>	2- ft	2- ft	2- ft	2- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-22-18 11:05	Oct-22-18 11:15	Oct-22-18 11:25	Oct-22-18 11:55		
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00		
	<i>Analyzed:</i>	Oct-25-18 21:33	Oct-25-18 21:54	Oct-25-18 22:14	Oct-25-18 22:34		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400		
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-25-18 14:30	Oct-25-18 14:30	Oct-25-18 14:30	Oct-25-18 14:30		
	<i>Analyzed:</i>	Oct-25-18 18:04	Oct-25-18 18:10	Oct-25-18 18:31	Oct-25-18 18:36		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		90.0 4.95	26.2 4.95	401 4.97	969 4.95		
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-25-18 16:00	Oct-25-18 16:00	Oct-25-18 16:00	Oct-25-18 16:00		
	<i>Analyzed:</i>	Oct-26-18 00:34	Oct-26-18 00:53	Oct-26-18 01:49	Oct-26-18 02:08		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		

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 - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS04**
Lab Sample Id: 603505-001

Matrix: Soil
Date Collected: 10.22.18 11.05

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067615

Date Prep: 10.25.18 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.0	4.95	mg/kg	10.25.18 18.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067717

Date Prep: 10.25.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 00.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 00.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.26.18 00.34	
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 00.34	



Certificate of Analytical Results 603505

LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS04**
 Lab Sample Id: 603505-001

Matrix: Soil
 Date Collected: 10.22.18 11.05

Date Received: 10.25.18 11.35
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.25.18 21.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.25.18 21.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	10.25.18 21.33		
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.25.18 21.33		



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS03**
Lab Sample Id: 603505-002

Matrix: Soil
Date Collected: 10.22.18 11.15

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067615

Date Prep: 10.25.18 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.2	4.95	mg/kg	10.25.18 18.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067717

Date Prep: 10.25.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 00.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 00.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.26.18 00.53	
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 00.53	



Certificate of Analytical Results 603505

LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS03**
 Lab Sample Id: 603505-002

Matrix: Soil
 Date Collected: 10.22.18 11.15

Date Received: 10.25.18 11.35
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.25.18 21.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.25.18 21.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	10.25.18 21.54		
1,4-Difluorobenzene	540-36-3	115	%	70-130	10.25.18 21.54		



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS02**
Lab Sample Id: 603505-003

Matrix: Soil
Date Collected: 10.22.18 11.25

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067615

Date Prep: 10.25.18 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	401	4.97	mg/kg	10.25.18 18.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067717

Date Prep: 10.25.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 01.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 01.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.26.18 01.49	
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 01.49	



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS02**
Lab Sample Id: 603505-003

Matrix: Soil
Date Collected: 10.22.18 11.25

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: JUM

Analyst: JUM

Seq Number: 3067712

Date Prep: 10.25.18 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.25.18 22.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.25.18 22.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.25.18 22.14		
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.25.18 22.14		



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS01**
Lab Sample Id: 603505-004

Matrix: Soil
Date Collected: 10.22.18 11.55

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067615

Date Prep: 10.25.18 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	969	4.95	mg/kg	10.25.18 18.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067717

Date Prep: 10.25.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 02.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 02.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 02.08	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 02.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.26.18 02.08	
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 02.08	



Certificate of Analytical Results 603505



LT Environmental, Inc., Arvada, CO

PLU 78 SWD

Sample Id: **SS01**
Lab Sample Id: 603505-004

Matrix: Soil
Date Collected: 10.22.18 11.55

Date Received: 10.25.18 11.35
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: JUM

Analyst: JUM

Seq Number: 3067712

Date Prep: 10.25.18 17.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.25.18 22.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.25.18 22.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.25.18 22.34		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.25.18 22.34		



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



LT Environmental, Inc.

PLU 78 SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067615

MB Sample Id: 7664859-1-BLK

Matrix: Solid

LCS Sample Id: 7664859-1-BKS

Prep Method: E300P

Date Prep: 10.25.18

LCSD Sample Id: 7664859-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	272	109	274	110	90-110	1	20	mg/kg	10.25.18 16:50	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067615

Parent Sample Id: 603504-001

Matrix: Soil

MS Sample Id: 603504-001 S

Prep Method: E300P

Date Prep: 10.25.18

MSD Sample Id: 603504-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.5	248	280	107	282	107	90-110	1	20	mg/kg	10.25.18 17:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067615

Parent Sample Id: 603552-003

Matrix: Soil

MS Sample Id: 603552-003 S

Prep Method: E300P

Date Prep: 10.25.18

MSD Sample Id: 603552-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	262	106	262	106	90-110	0	20	mg/kg	10.25.18 18:20	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067717

MB Sample Id: 7664894-1-BLK

Matrix: Solid

LCS Sample Id: 7664894-1-BKS

Prep Method: TX1005P

Date Prep: 10.25.18

LCSD Sample Id: 7664894-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	991	99	1040	104	70-135	5	20	mg/kg	10.25.18 20:45	
Diesel Range Organics (DRO)	<8.13	1000	992	99	1070	107	70-135	8	20	mg/kg	10.25.18 20:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		129		122		70-135	%	10.25.18 20:45
o-Terphenyl	102		103		109		70-135	%	10.25.18 20:45

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



LT Environmental, Inc.

PLU 78 SWD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067717

Parent Sample Id: 603504-001

Matrix: Soil

MS Sample Id: 603504-001 S

Prep Method: TX1005P

Date Prep: 10.25.18

MSD Sample Id: 603504-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1090	109	1020	102	70-135	7	20	mg/kg	10.25.18 21:42	
Diesel Range Organics (DRO)	<8.12	999	1130	113	1060	106	70-135	6	20	mg/kg	10.25.18 21:42	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		118		70-135	%	10.25.18 21:42
o-Terphenyl	118		100		70-135	%	10.25.18 21:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067712

MB Sample Id: 7664946-1-BLK

Matrix: Solid

LCS Sample Id: 7664946-1-BKS

Prep Method: SW5030B

Date Prep: 10.25.18

LCSD Sample Id: 7664946-1-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	0.0956	96	0.0962	96	70-130	1	35	mg/kg	10.25.18 17:51	
Toluene	<0.00200	0.100	0.0956	96	0.0959	96	70-130	0	35	mg/kg	10.25.18 17:51	
Ethylbenzene	<0.00200	0.100	0.0983	98	0.0985	99	70-130	0	35	mg/kg	10.25.18 17:51	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.190	95	70-130	1	35	mg/kg	10.25.18 17:51	
o-Xylene	<0.00200	0.100	0.0911	91	0.0925	93	70-130	2	35	mg/kg	10.25.18 17:51	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		91		95		70-130	%	10.25.18 17:51
4-Bromofluorobenzene	104		89		89		70-130	%	10.25.18 17:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067712

Parent Sample Id: 602545-007

Matrix: Soil

MS Sample Id: 602545-007 S

Prep Method: SW5030B

Date Prep: 10.25.18

MSD Sample Id: 602545-007 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	0.0775	78	0.0841	84	70-130	8	35	mg/kg	10.25.18 18:31	
Toluene	<0.00200	0.100	0.0789	79	0.0841	84	70-130	6	35	mg/kg	10.25.18 18:31	
Ethylbenzene	<0.00200	0.100	0.0813	81	0.0871	87	70-130	7	35	mg/kg	10.25.18 18:31	
m,p-Xylenes	<0.00400	0.200	0.157	79	0.169	85	70-130	7	35	mg/kg	10.25.18 18:31	
o-Xylene	<0.00200	0.100	0.0773	77	0.0833	83	70-130	7	35	mg/kg	10.25.18 18:31	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		94		70-130	%	10.25.18 18:31
4-Bromofluorobenzene	94		94		70-130	%	10.25.18 18:31

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



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Phoenix, Arizona (480-355-0900)

Page 1 of 7

CHAIN OF CUSTODY

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: <u>IT Environmental, Inc</u> Project Name/Number: <u>PLU 78 SWD</u>				Project Location: <u>FDNY MAN</u> <u>2RP 4825</u>				W = Water S = Soil/Sediment GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WM = Waste Water A = Air							
Company Address: <u>3300 N.W. St. Building 1 Unit 103 Miami, TX 75702</u>				Phone No: <u>(432) 704-5178</u>											
Email: <u>adrian.baker@itenv.com</u>				Invoice To: <u>Kyle Littlell XTO Energy</u>											
Project Contact: <u>Adrian Baker</u>				PO Number:											
Sampler's Name: <u>L. Campbell</u>															

No.	Field ID / Point of Collection	Collection		Matrix	# of bottles	Number of preserved bottles							Notes	Field Comments			
		Sample Depth	Date			Time	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4			MEOH	NONE	
1		SS04	2'	10/22	11:05	S	1										
2		SS03	2'		11:15	S	1										
3		SS02	2'		11:25	S	1										
4		SS01	2'		11:55	S	1										
5																	
6																	
7																	
8																	
9																	
10																	

Turnaround Time (Business days)				Data Deliverable Information				Notes			
<input checked="" type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT				<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg / raw data)				Same day TAT			
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT				<input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV							
<input type="checkbox"/> 2 Day EMERGENCY <input checked="" type="checkbox"/> Contract TAT				<input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411							
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist							

TAT Starts Day received by Lab, if received by 5:00 pm				FED-EX / UPS: Tracking #			
Relinquished by Sampler: <u>[Signature]</u>				Relinquished By: <u>[Signature]</u>			
Relinquished by: <u>[Signature]</u>				Relinquished By: <u>[Signature]</u>			
Relinquished by: <u>[Signature]</u>				Relinquished By: <u>[Signature]</u>			
Relinquished by: <u>[Signature]</u>				Relinquished By: <u>[Signature]</u>			

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY			
Date Time: <u>10/23/11 1:40</u>		Date Time: <u>10/24 15:30</u>	
Received By: <u>[Signature]</u>		Received By: <u>[Signature]</u>	
Relinquished By: <u>[Signature]</u>		Relinquished By: <u>[Signature]</u>	
Date Time: <u>10/23/11 1:40</u>		Date Time: <u>10/24 15:30</u>	
Received By: <u>[Signature]</u>		Received By: <u>[Signature]</u>	
Relinquished By: <u>[Signature]</u>		Relinquished By: <u>[Signature]</u>	
Date Time: <u>10/23/11 1:40</u>		Date Time: <u>10/24 15:30</u>	
Received By: <u>[Signature]</u>		Received By: <u>[Signature]</u>	
Relinquished By: <u>[Signature]</u>		Relinquished By: <u>[Signature]</u>	

Custody Seal #				Preserved where applicable			
On Ice <input checked="" type="checkbox"/> Cooler Temp. <u>0.3</u> Thermo. Corr. Factor <u>1135</u>							

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for at losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

ORIGIN ID:CA0A (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 24OCT18 ACT WGT: 4.00 LB CAD: 101813/06/NET/4040 DIMS: 16x12x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 INV/ REF. PO. DEPT.	
TRK# 7735 6050 4702 0201 THU - 25 OCT HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB 41 MAFA 	
	

552J1/89FB/DCA5

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Client: LT Environmental, Inc.

Date/ Time Received: 10/25/2018 11:35:00 AM

Work Order #: 603505

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 10/25/2018

Checklist reviewed by:

Jessica Kramer


Date: 10/25/2018

ATTACHMENT 4: PHOTOGRAPHIC LOG






View east of the northern site boundary.

Project: 012918151	XTO Energy, Inc. PLU #78 SWD	 Advancing Opportunity
September 30, 2018	Photographic Log	



View south of release area within the bermed containment.

Project: 012918151	XTO Energy, Inc. PLU #78 SWD	 Advancing Opportunity
September 30, 2018	Photographic Log	

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

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

CONDITIONS

Action 200056

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 200056
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Closure of release approved. Incident will remain open as release area is subject to 19.15.29.13 NMAC and will need to be addressed during P&A activities.	3/24/2023