ENSOLUM

August 14, 2025

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Poker Lake Unit 274
API Number 30-015-35138
Incident Number NAB1512157315
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* as a follow-up to the *Deferral Request* dated May 8, 2019. The *Deferral Request* was approved by the New Mexico Oil Conservation Division (NMOCD) on March 19, 2020. This *Closure Request* documents the excavation and soil sampling activities completed at the Poker Lake Unit 274 (Site) following final plugging and abandonment of the well and removal of the surface production equipment from the deferred area. Based on the additional remediation activities described below, XTO is submitting this *Closure Request* and requesting no further action and closure for Incident Number NAB1512157315.

SITE DESCRIPTION AND RELEASE BACKGROUND

The Site is located in Unit O, Section 12, Township 24 South, Range 29 East, in Eddy County, New Mexico (32.225853°, -103.9370041°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On April 20, 2015, a failed connection on the heater-treater resulted in the release of approximately 9 barrels (bbls) of produced water and 13 bbls of crude oil within the process equipment containment berm. A small area of pasture south of the well pad was affected by overspray. A vacuum truck was used to recover approximately 5 bbls of released fluid. XTO reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on April 29, 2015. The release was assigned Remediation Permit (RP) Number 2RP-2978 and Incident Number NAB1512157315.

The release was 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 was 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.

Between August 2018 and April 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the April 20, 2015, crude oil and produced water release. Impacted soil was excavated to the maximum extent possible; however, impacted soil was left in place for compliance with XTO safety policy restricting soil disturbing activities within a 2-foot radius of active

process equipment and pipelines. A *Deferral Request* was submitted to the NMOCD requesting deferral of the impacted soil within 2-feet of active process equipment and pipelines until a future major well pad alteration or final plugging and abandonment of the well. The *Deferral Request* was approved by the NMOCD on March 19, 2020. Additional details regarding the delineation, excavation, and soil sampling activities can be referenced in the May 8, 2019, *Deferral Request*, which is included as an attachment to this report.

The Site was characterized to determine the applicability of Table I Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review were detailed in the approved *Deferral Request*. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

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

Since the well was plugged and abandoned and the well pad was being reclaimed, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet per NMAC 19.15.29.13.D (1), for areas that will be reclaimed following remediation.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

The Poker Lake Unit 274 well was plugged and abandoned (P&A) on April 9, 2024, and all surface production equipment was removed from the Site.

During November 2024, Ensolum personnel were at the Site to oversee excavation activities to address the impacted soil that was left in place around former process equipment and pipelines, as indicated by April 2019 delineation soil samples SS12 and SS12A and excavation soil sample FS01. The 2019 excavation extent and soil sample locations are presented on Figure 2 and detailed in the attached *Deferral Request*. The 2024 excavation activities were performed using a backhoe and transport vehicles. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation was completed to depths ranging from 2.5 feet to 4 feet below ground surface (bgs).

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS08, FS01A, and FS06A were collected from the floor of the excavation at depths ranging from 2.5 feet to 4 feet bgs. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. Additionally, one assessment soil sample (SS06) was collected from a depth of 0.5 feet bgs in the vicinity of the original August 2018 assessment sample (SS06) to assess for the presence or absence of residual TPH impacted soil. The excavation extent and soil

sample locations are presented on Figure 2. Photographic documentation of the excavation activities are included in Appendix A.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM 4500.

Laboratory analytical results for assessment soil sample SS06 indicated all COC concentrations were compliant with the reclamation requirements. Laboratory analytical results for all final excavation floor samples (FS01A, FS02 through FS05, FS06A, FS07, and FS08) and excavation sidewall samples (SW01 through SW03), indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements. Laboratory analytical results for excavation floor samples FS01 and FS06 initially exceeded the reclamation requirement for TPH; additional soil was removed from these areas and subsequent floor samples FS01A and FS06A were in compliance. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

The excavation area measured approximately 1,450 square feet. Approximately 175 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured soil. One representative 5-point composite sample (BS01) was collected from the topsoil backfill material. The backfill soil sample was handled and analyzed following the same procedures as described above. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical report is included as Appendix B.

Following backfill activities, the well pad was recontoured to match the surrounding topography and the surface was prepared for seeding. The well pad will be seeded when temperatures and precipitation are most conducive to vegetation growth. The reclaimed well pad will be seeded with the BLM sandy sites seed mix #2 at the rate specified below in pounds of pure live seed (PLS) per acre.

Species/Cultivar	PLS/Acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled and the seed will be raked in by chaining or dragging the Site. Photographs of the reclaimed excavation area are provided in Appendix A.

The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by a licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed area has uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

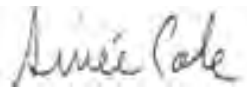
CLOSURE REQUEST

Excavation activities were conducted at the Site to address the impacted soil resulting from the April 20, 2015, crude oil and produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria and reclamation requirements. Based on the soil sample analytical results, no further remediation is required. A copy of the *Deferral Request* detailing the 2019 excavation activities is included as Appendix C.

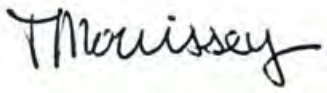
Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAB1512157315.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Aimee Cole
Senior Managing Scientist



Tacoma Morrissey
Associate Principal

cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	May 8, 2019, *Deferral Request*

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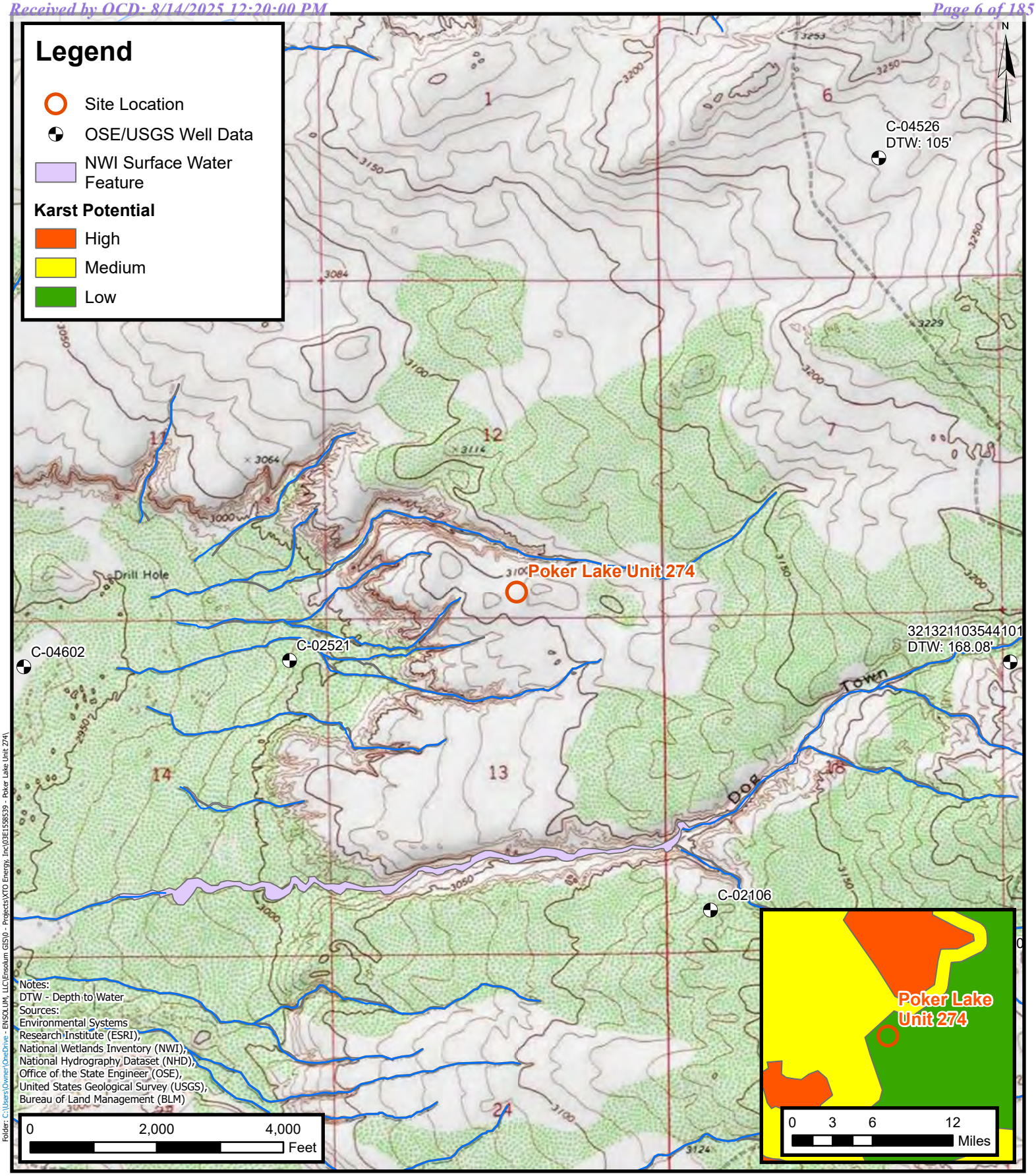
FIGURES



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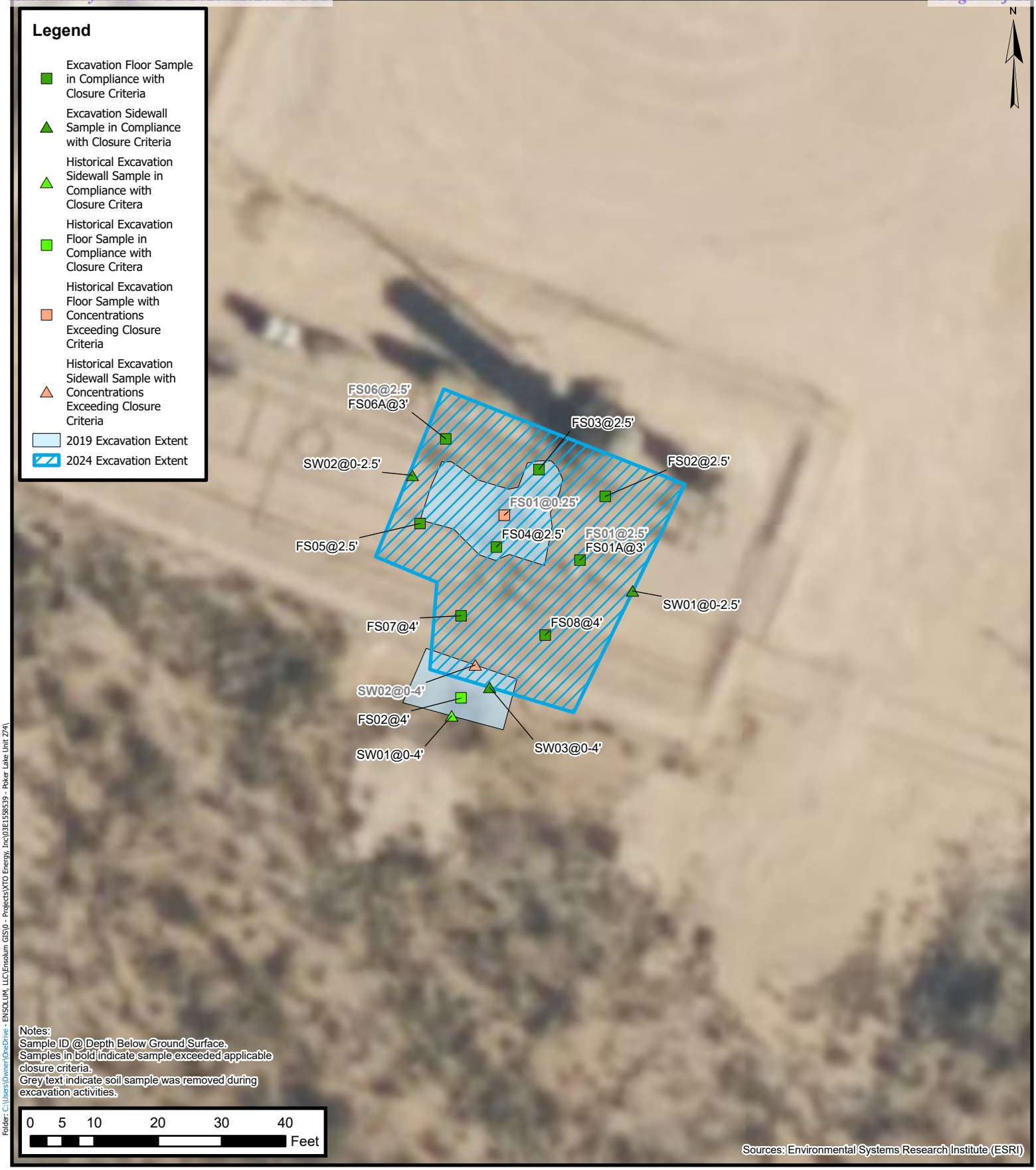
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
Poker Lake Unit 274
Incident Number: NAB1512157315
Unit O, Sec 12, T24S, R29E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03E1598539 - Poker Lake Unit 274\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
Poker Lake Unit 274
Incident Number: NAB1512157315
Unit O, Sec 12, T24S, R29E
Eddy County, New Mexico

FIGURE 2

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TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 274
XTO Energy, Inc.
Eddy County, New Mexico

Sample Designation	Sample Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirement for the top four feet			NE	NE	NE	NE	NE	NE	100	600
Assessment Soil Samples										
SS01	08/14/2018	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS02	08/14/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS02A	04/04/2019	1	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5.7
~~SS03~~	~~08/14/2018~~	~~0.5~~	~~<0.00200~~	~~<0.00200~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~<5.00~~
~~SS03A~~	~~04/04/2019~~	~~1~~	~~<0.00198~~	~~<0.00198~~	~~<74.9~~	~~4,840~~	~~927~~	~~4,840~~	~~5,770~~	~~<5.04~~
SS04	08/14/2018	0.5	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS04A	04/04/2019	1	<0.00200	<0.00200	<15.0	16.0	<15.0	16.0	16.0	22.3
SS05	08/14/2018	0.5	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<5.03
SS05A	04/04/2019	1	<0.00200	<0.00200	<15.0	28.3	<15.0	28.3	28.3	5.48
SS06	08/14/2018	0.5	<0.00200	<0.00200	<15.0	238	<15.0	238	**238**	<4.95
SS06	11/12/2024	0.5	<0.050	<0.300	<10.0	18.5	<10.0	18.5	18.5	80.0
SS07	08/15/2018	0.5	<0.00201	<0.00201	<15.0	78.2	<15.0	78.2	78.2	<5.04
SS08	08/15/2018	1	<0.00202	<0.00202	<15.0	99.8	<15.0	99.8	99.8	19.7
SS09	08/15/2018	0.5	<0.00198	<0.00198	<15.0	95.5	<15.0	95.5	95.5	<4.95
SS10	04/04/2019	1	<0.00199	<0.00199	<15.0	21.9	<15.0	21.9	21.9	<4.99
SS10A	04/04/2019	2	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
SS11	04/04/2019	1	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS11A	04/04/2019	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
~~SS12~~	~~04/04/2019~~	~~0.5~~	~~<0.00200~~	~~<0.00200~~	~~<74.8~~	~~4,810~~	~~851~~	~~4,810~~	~~5,660~~	~~17.7~~
~~SS12A~~	~~04/04/2019~~	~~1~~	~~<0.00200~~	~~0.00332~~	~~<74.9~~	~~5,820~~	~~993~~	~~5,820~~	~~6,810~~	~~5.07~~
SS12B	04/30/2019	2.5	<0.00200	<0.00200	<15.0	17.8	<15.0	17.8	17.8	5.61

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 274
XTO Energy, Inc.
Eddy County, New Mexico

Sample Designation	Sample Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirement for the top four feet			NE	NE	NE	NE	NE	NE	100	600
2018/2019 - Excavation Soil Samples										
~~FS01~~	~~04/04/2019~~	~~0.25~~	~~<0.00202~~	~~0.00268~~	~~<74.9~~	~~4,300~~	~~901~~	~~**4,300**~~	~~**5,200**~~	~~18.2~~
FS02	04/30/2019	4	<0.00200	<0.00200	<15.0	18.2	<15.0	18.2	18.2	233
SW01	04/30/2019	0 - 4	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.00
~~SW02~~	~~04/30/2019~~	~~0 - 4~~	~~<0.00199~~	~~<0.00199~~	~~<15.0~~	~~624~~	~~151~~	~~624~~	~~**775**~~	~~84.6~~
2024 - Excavation Soil Samples										
~~FS01~~	~~11/12/2024~~	~~2.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~106~~	~~72.3~~	~~106~~	~~**178**~~	~~16.0~~
FS01A	11/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS02	11/12/2024	2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS03	11/12/2024	2.5	<0.050	<0.300	<10.0	69.4	28.8	69.4	98.2	48.0
FS04	11/13/2024	2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS05	11/13/2024	2.5	<0.050	<0.300	<10.0	12.8	<10.0	12.8	12.8	48.0
~~FS06~~	~~11/13/2024~~	~~2.5~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~128.0~~	~~69.6~~	~~128~~	~~**198**~~	~~32.0~~
FS06A	11/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS07	11/13/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS08	11/13/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW01	11/12/2024	0 - 2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SW02	11/12/2024	0 - 2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW03	11/13/2024	0 - 4	<0.050	<0.300	<10.0	26.1	11.5	26.1	37.6	48.0
Backfill Soil Sample										
BS01	05/13/2025	-	<0.050	<0.300	<10.0	28.3	<10.0	28.3	28.3	16.0

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
< : Indicates result less than the stated laboratory reporting limit
NA: Not Analyzed
NE: Not Established

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
*Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria and/or reclamation standard where*
~~Grey~~ text represents soil samples that have been excavated
Grey text indicates the 2018 soil sample was resampled during 2024

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APPENDIX A

Photographic Log

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Photographic Log
XTO Energy, Inc.
Poker Lake Unit 274
NAB1512157315

Photograph: 1 Date: 11/12/2024
Description: Excavation activities
View: Southeast

Photograph: 2 Date: 11/13/2024
Description: Excavation activities
View: Northwest

Photograph: 3 Date: 11/18/2024
Description: Excavation activities
View: Southwest

Photograph: 4 Date: 12/5/2024
Description: Backfilled excavation
View: Southeast

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APPENDIX B

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 16, 2025

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: POKER LAKE UNIT 274

Enclosed are the results of analyses for samples received by the laboratory on 05/15/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/15/2025	Sampling Date:	05/13/2025
Reported:	05/16/2025	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539 - RECLAMATION	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.22569-103.93649		

Sample ID: BS 01 0' (H252935-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2025	ND	2.15	108	2.00	1.47	
Toluene*	<0.050	0.050	05/16/2025	ND	2.26	113	2.00	2.38	
Ethylbenzene*	<0.050	0.050	05/16/2025	ND	2.14	107	2.00	1.22	
Total Xylenes*	<0.150	0.150	05/16/2025	ND	6.40	107	6.00	1.22	
Total BTEX	<0.300	0.300	05/16/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	05/16/2025	ND	480	120	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2025	ND	188	93.9	200	1.42	
DRO >C10-C28*	**28.3**	10.0	05/15/2025	ND	199	99.4	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	05/15/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *101 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**	**ANALYSIS REQUEST**	
Project Manager: Aimee Cole	**P.O. #:**		
Address: 3122 National Parks Hwy.	**Company:** XTO Energy		
City: Carlsbad **State:** NM **Zip:** 88220	**Attn:** Amy Ruth		
Phone #: 844-500-7775 **Fax #:**	**Address:** 3104 E. Green St.		
Project #: 03E1558539 **Project Owner:** XTO Energy	**City:** Carlsbad		
Project Name: Poker Lake Unit 274 - Reclamation	**State:** NM **Zip:** 88220		
Project Location: 32.22569, -103.93649	**Phone #:**		
Sampler Name: Bowan Simmons	**Fax #:**		

FOR LAB USE ONLY					MATRIX						PRESERV			SAMPLING				
Lab I.D.	**Sample I.D.**	**Sample Depth (feet)**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	**DATE**	**TIME**	CHLORIDE	BTEX	TPH
H253935 1	BS01	0	C	1			✓					✓		5/13/25	13:50	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	**Date:** 5.15.25	**Received By:**	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
	Time: 1400		**All Results are emailed. Please provide Email address:** ACole@ensolum.com, TMorrissey@ensolum.com, HGreen@ensolum.com
Relinquished By:	**Date:**	**Received By:**	**REMARKS:** API: 30-015-35138 AFE: PA.2023.03495.EXP.01 GFCM: 47502000
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 3.6 **Corrected Temp. °C** 3.9	**Sample Condition** Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)**
			Turnaround Time: 24 HR. **Standard** ☐ **Rush** ☑ **Thermometer ID** #113 **Correction Factor** -0.5°C
			Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No **Observed Temp. °C** #140 **Corrected Temp. °C** +0.3 5/15/25

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 15, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: POKER LAKE UNIT 274

Enclosed are the results of analyses for samples received by the laboratory on 11/14/24 13:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 04 2.5 (H246960-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/15/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *72.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *73.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 05 2.5 (H246960-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/15/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	**12.8**	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 06 2.5 (H246960-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/15/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	**128**	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	**69.6**	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 07 4 (H246960-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/15/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *110 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: SW 03 0-4 (H246960-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2024	ND	1.97	98.4	2.00	8.56	
Toluene*	<0.050	0.050	11/15/2024	ND	1.99	99.3	2.00	9.64	
Ethylbenzene*	<0.050	0.050	11/15/2024	ND	2.15	107	2.00	7.04	
Total Xylenes*	<0.150	0.150	11/15/2024	ND	6.42	107	6.00	7.43	
Total BTEX	<0.300	0.300	11/15/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	**26.1**	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	**11.5**	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/14/2024	Sampling Date:	11/13/2024
Reported:	11/15/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E1558539	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 08 4 (H246960-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2024	ND	2.49	125	2.00	2.71	
Toluene*	<0.050	0.050	11/14/2024	ND	2.47	124	2.00	7.42	
Ethylbenzene*	<0.050	0.050	11/14/2024	ND	2.61	130	2.00	8.86	
Total Xylenes*	<0.150	0.150	11/14/2024	ND	7.62	127	6.00	9.17	
Total BTEX	<0.300	0.300	11/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/15/2024	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2024	ND	214	107	200	2.95	
DRO >C10-C28*	<10.0	10.0	11/15/2024	ND	215	107	200	6.91	
EXT DRO >C28-C36	<10.0	10.0	11/15/2024	ND					

Surrogate: 1-Chlorooctane *113 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *114 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 9 of 9

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Aimee Cole	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy Inc.
City: Carlsbad State: NM Zip: 88220	Attn: Amy Ruth
Phone #: 720-384-7365 Fax #:	Address: 3104 E. Greene St.
Project #: 03E15585539 Project Owner: XTO	City: Carlsbad
Project Name: Poker Lake Unit 274	State: NM Zip: 88220
Project Location: 32.22569, -103.93649	Phone #:
Sampler Name: Azad Vojdani	Fax #:

ANALYSIS REQUEST

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	CHLORIDE
H24[illegible] 1	FS04	2.5	C	1			✓					✓		11-13-24	0936	✓	✓	✓
2	FS05	2.5	C	1			✓					✓		↓	1122	✓	✓	✓
3	FS06	2.5	C	1			✓					✓		↓	1124	✓	✓	✓
4	FS07	4'	C	1			✓					✓		↓	1125	✓	✓	✓
5	SW03	0-4'	C	1			✓					✓		↓	1055 ~~1129~~	✓	✓	✓
6	FS08	4'	C	1			✓					✓		↓	~~1055~~ [illegible]	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [signature]	Date: 11-14-24 Time: 1355	Received By: [signature]	Verbal Result: ☐ Yes ☒ No Add'l Phone #:
			All Results are emailed. Please provide Email address: TMorrissey@ensolum.com, Acol@ensolum.com
Relinquished By:	Date: Time:	Received By:	REMARKS: API: 30-015-35138 AFE: PA.2023.03495.EXP.01 Incident #: Nab1512157315
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.4 Corrected Temp. °C 5.8	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) AP

Turnaround Time: Standard ☐ Rush ☒ 24 TAT
Thermometer ID #113 Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 20, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: POKER LAKE UNIT 274

Enclosed are the results of analyses for samples received by the laboratory on 11/14/24 13:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 01 2.5	H246963-01	Soil	12-Nov-24 00:00	14-Nov-24 13:55
FS 02 2.5	H246963-02	Soil	12-Nov-24 00:00	14-Nov-24 13:55
FS 03 2.5	H246963-03	Soil	12-Nov-24 00:00	14-Nov-24 13:55
SW 01 0-2.5	H246963-04	Soil	12-Nov-24 00:00	14-Nov-24 13:55
SW 02 0-2.5	H246963-05	Soil	12-Nov-24 00:00	14-Nov-24 13:55
SS 06 0.5	H246963-06	Soil	12-Nov-24 00:00	14-Nov-24 13:55

11/20/24 - Client added BTEX and TPH to -06 (see COC). This is the revised report and will replace the one sent on 11/15/24.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

FS 01 2.5

H246963-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*112 %*	*71.5-134*		*4111451*	JH	*14-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
DRO >C10-C28*	**106**		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
EXT DRO >C28-C36	**72.3**		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*89.8 %*	*48.2-134*		*4111442*	MS	*15-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.1 %*	*49.1-148*		*4111442*	MS	*15-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

FS 02 2.5

H246963-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111451	JH	14-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*4111451*	JH	*14-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111442	MS	15-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*90.8 %*	*48.2-134*		*4111442*	MS	*15-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.2 %*	*49.1-148*		*4111442*	MS	*15-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

FS 03 2.5

H246963-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*112 %*	*71.5-134*		*4111451*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
DRO >C10-C28*	**69.4**		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
EXT DRO >C28-C36	**28.8**		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*82.4 %*	*48.2-134*		*4111449*	MS	*14-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.6 %*	*49.1-148*		*4111449*	MS	*14-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

SW 01 0-2.5

H246963-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*71.5-134*		*4111451*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*89.7 %*	*48.2-134*		*4111449*	MS	*14-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*95.7 %*	*49.1-148*		*4111449*	MS	*14-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

SW 02 0-2.5

H246963-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111451	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*112 %*	*71.5-134*		*4111451*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111449	MS	14-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*85.7 %*	*48.2-134*		*4111449*	MS	*14-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.0 %*	*49.1-148*		*4111449*	MS	*14-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

SS 06 0.5

H246963-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	4111518	CT	15-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111527	JH	18-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111527	JH	18-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111527	JH	18-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111527	JH	18-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111527	JH	18-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.9 %*	*71.5-134*		*4111527*	JH	*18-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111530	MS	18-Nov-24	8015B	
DRO >C10-C28*	**18.5**		10.0	mg/kg	1	4111530	MS	18-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111530	MS	18-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*93.8 %*	*48.2-134*		*4111530*	MS	*18-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*94.3 %*	*49.1-148*		*4111530*	MS	*18-Nov-24*	*8015B*	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111518 - 1:4 DI Water										
Blank (4111518-BLK1)				Prepared & Analyzed: 15-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4111518-BS1)				Prepared & Analyzed: 15-Nov-24						
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (4111518-BSD1)				Prepared & Analyzed: 15-Nov-24						
Chloride	432	16.0	mg/kg	400		108	80-120	3.64	20	

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111451 - Volatiles										
Blank (4111451-BLK1)				Prepared & Analyzed: 14-Nov-24						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0553*		mg/kg	*0.0500*		*111*	*71.5-134*			
LCS (4111451-BS1)				Prepared & Analyzed: 14-Nov-24						
Benzene	2.49	0.050	mg/kg	2.00		125	82.8-130			
Toluene	2.47	0.050	mg/kg	2.00		124	86-128			
Ethylbenzene	2.61	0.050	mg/kg	2.00		130	85.9-128			BS-3
m,p-Xylene	5.08	0.100	mg/kg	4.00		127	89-129			
o-Xylene	2.53	0.050	mg/kg	2.00		127	86.1-125			BS-3
Total Xylenes	7.62	0.150	mg/kg	6.00		127	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0521*		mg/kg	*0.0500*		*104*	*71.5-134*			
LCS Dup (4111451-BSD1)				Prepared & Analyzed: 14-Nov-24						
Benzene	2.43	0.050	mg/kg	2.00		121	82.8-130	2.71	15.8	
Toluene	2.29	0.050	mg/kg	2.00		115	86-128	7.42	15.9	
Ethylbenzene	2.39	0.050	mg/kg	2.00		119	85.9-128	8.86	16	
m,p-Xylene	4.64	0.100	mg/kg	4.00		116	89-129	9.10	16.2	
o-Xylene	2.31	0.050	mg/kg	2.00		115	86.1-125	9.33	16.7	
Total Xylenes	6.95	0.150	mg/kg	6.00		116	88.2-128	9.17	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0495*		mg/kg	*0.0500*		*99.0*	*71.5-134*			
Batch 4111527 - Volatiles										
Blank (4111527-BLK1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111527 - Volatiles										
Blank (4111527-BLK1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.5*	*71.5-134*			
LCS (4111527-BS1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
Benzene	2.13	0.050	mg/kg	2.00		106	82.8-130			
Toluene	2.04	0.050	mg/kg	2.00		102	86-128			
Ethylbenzene	2.05	0.050	mg/kg	2.00		103	85.9-128			
m,p-Xylene	4.10	0.100	mg/kg	4.00		103	89-129			
o-Xylene	2.00	0.050	mg/kg	2.00		100	86.1-125			
Total Xylenes	6.10	0.150	mg/kg	6.00		102	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0503*		mg/kg	*0.0500*		*101*	*71.5-134*			
LCS Dup (4111527-BSD1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
Benzene	2.18	0.050	mg/kg	2.00		109	82.8-130	2.35	15.8	
Toluene	2.08	0.050	mg/kg	2.00		104	86-128	1.71	15.9	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	85.9-128	0.0771	16	
m,p-Xylene	4.09	0.100	mg/kg	4.00		102	89-129	0.172	16.2	
o-Xylene	2.00	0.050	mg/kg	2.00		100	86.1-125	0.0397	16.7	
Total Xylenes	6.10	0.150	mg/kg	6.00		102	88.2-128	0.102	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0490*		mg/kg	*0.0500*		*98.0*	*71.5-134*			

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111442 - General Prep - Organics										
Blank (4111442-BLK1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*64.7*		mg/kg	*50.0*		*129*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*69.5*		mg/kg	*50.0*		*139*	*49.1-148*			
LCS (4111442-BS1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	214	10.0	mg/kg	200		107	81.5-123			
DRO >C10-C28	215	10.0	mg/kg	200		107	77.7-122			
Total TPH C6-C28	429	10.0	mg/kg	400		107	80.9-121			
Surrogate: 1-Chlorooctane	*65.3*		mg/kg	*50.0*		*131*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*67.9*		mg/kg	*50.0*		*136*	*49.1-148*			
LCS Dup (4111442-BSD1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	220	10.0	mg/kg	200		110	81.5-123	2.95	13	
DRO >C10-C28	230	10.0	mg/kg	200		115	77.7-122	6.91	15.6	
Total TPH C6-C28	451	10.0	mg/kg	400		113	80.9-121	4.95	18.5	
Surrogate: 1-Chlorooctane	*65.7*		mg/kg	*50.0*		*131*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*67.2*		mg/kg	*50.0*		*134*	*49.1-148*			
Batch 4111449 - General Prep - Organics										
Blank (4111449-BLK1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*56.9*		mg/kg	*50.0*		*114*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*65.0*		mg/kg	*50.0*		*130*	*49.1-148*			

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111449 - General Prep - Organics										
LCS (4111449-BS1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	210	10.0	mg/kg	200		105	81.5-123			
DRO >C10-C28	197	10.0	mg/kg	200		98.6	77.7-122			
Total TPH C6-C28	407	10.0	mg/kg	400		102	80.9-121			
Surrogate: 1-Chlorooctane	*59.6*		mg/kg	*50.0*		*119*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*65.7*		mg/kg	*50.0*		*131*	*49.1-148*			
LCS Dup (4111449-BSD1)				Prepared & Analyzed: 14-Nov-24						
GRO C6-C10	212	10.0	mg/kg	200		106	81.5-123	1.15	13	
DRO >C10-C28	196	10.0	mg/kg	200		98.2	77.7-122	0.395	15.6	
Total TPH C6-C28	408	10.0	mg/kg	400		102	80.9-121	0.403	18.5	
Surrogate: 1-Chlorooctane	*59.2*		mg/kg	*50.0*		*118*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*65.2*		mg/kg	*50.0*		*130*	*49.1-148*			
Batch 4111530 - General Prep - Organics										
Blank (4111530-BLK1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*57.8*		mg/kg	*50.0*		*116*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*57.0*		mg/kg	*50.0*		*114*	*49.1-148*			
LCS (4111530-BS1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
GRO C6-C10	211	10.0	mg/kg	200		105	81.5-123			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	77.7-122			
Total TPH C6-C28	409	10.0	mg/kg	400		102	80.9-121			
Surrogate: 1-Chlorooctane	*64.3*		mg/kg	*50.0*		*129*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*60.3*		mg/kg	*50.0*		*121*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: POKER LAKE UNIT 274 Project Number: 03E15585539 Project Manager: AIMEE COLE Fax To:	Reported: 20-Nov-24 10:55

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111530 - General Prep - Organics										
LCS Dup (4111530-BSD1)				Prepared: 15-Nov-24 Analyzed: 18-Nov-24						
GRO C6-C10	213	10.0	mg/kg	200		106	81.5-123	0.943	13	
DRO >C10-C28	200	10.0	mg/kg	200		100	77.7-122	0.824	15.6	
Total TPH C6-C28	413	10.0	mg/kg	400		103	80.9-121	0.885	18.5	
Surrogate: 1-Chlorooctane	*60.5*		mg/kg	*50.0*		*121*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*57.1*		mg/kg	*50.0*		*114*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Aimee Cole	**P.O. #:**
Address: 3122 National Parks Hwy	**Company:** XTO Energy Inc.
City: Carlsbad **State:** NM **Zip:** 88220	**Attn:** Amy Ruth
Phone #: 720-384-7365 **Fax #:**	**Address:** 3104 E. Greene St.
Project #: 03E15585539 **Project Owner:** XTO	**City:** Carlsbad
Project Name: Poker Lake Unit 274	**State:** NM **Zip:** 88220
Project Location: 32.22569, -103.93649	**Phone #:**
Sampler Name: Azad Vojdani	**Fax #:**

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	CHLORIDE			TPH added 11-15	BTEX added 11-15	SOL						
H246903																												
1	FS01	2.5	G	1			✓					✓		11-12-24		✓	✓	✓										
2	FS02	2.5	G	1			✓					✓				✓	✓	✓										
3	FS03	2.5	G	1			✓					✓				✓	✓	✓										
4	SW01	0-2.5	G	1			✓					✓				✓	✓	✓										
5	SW02	0-2.5	G	1			✓					✓				✓	✓	✓										
6	SS06	0.5	G	1			✓					✓						✓			X	X						

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	**Date:** 11-14-24	**Received By:**	**Verbal Result:** ☐ Yes ☑ No **Add'l Phone #:**
	Time: 1355		**All Results are emailed. Please provide Email address:**
Relinquished By:	**Date:**	**Received By:**	TMorrissey@ensolum.com, Acol@ensolum.com
	Time:		**REMARKS:**
			API: 30-015-35138 AFE: PA.2023.03495.EXP.01 Incident #: Nab1512157315

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.4 Corrected Temp. °C 0.8	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☐ Yes ☑ No	**CHECKED BY: (Initials)** AR	**Turnaround Time:** #1140 Standard ☐ Rush ☑ Thermometer ID #113 Correction Factor -0.5°C 24 TAT **Bacteria (only) Sample Condition** Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 20, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: POKER LAKE UNIT 274

Enclosed are the results of analyses for samples received by the laboratory on 11/19/24 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/19/2024	Sampling Date:	11/18/2024
Reported:	11/20/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E15585539	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 01 A 3' (H247045-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/19/2024	ND	1.89	94.7	2.00	9.03	
Toluene*	<0.050	0.050	11/19/2024	ND	1.81	90.4	2.00	9.38	
Ethylbenzene*	<0.050	0.050	11/19/2024	ND	1.81	90.5	2.00	8.52	
Total Xylenes*	<0.150	0.150	11/19/2024	ND	5.34	89.1	6.00	8.88	
Total BTEX	<0.300	0.300	11/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/20/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2024	ND	232	116	200	2.08	
DRO >C10-C28*	<10.0	10.0	11/19/2024	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	11/19/2024	ND					

Surrogate: 1-Chlorooctane *97.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
AIMEE COLE
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/19/2024	Sampling Date:	11/18/2024
Reported:	11/20/2024	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT 274	Sampling Condition:	Cool & Intact
Project Number:	03E15585539	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.22569-103.93649		

Sample ID: FS 06 A 3' (H247045-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/19/2024	ND	1.89	94.7	2.00	9.03	
Toluene*	<0.050	0.050	11/19/2024	ND	1.81	90.4	2.00	9.38	
Ethylbenzene*	<0.050	0.050	11/19/2024	ND	1.81	90.5	2.00	8.52	
Total Xylenes*	<0.150	0.150	11/19/2024	ND	5.34	89.1	6.00	8.88	
Total BTEX	<0.300	0.300	11/19/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.2 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/20/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2024	ND	232	116	200	2.08	
DRO >C10-C28*	<10.0	10.0	11/19/2024	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	11/19/2024	ND					

Surrogate: 1-Chlorooctane *89.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Ensolum, LLC
Project Manager:	Aimee Cole
Address:	3122 National Parks Hwy
City:	Carlsbad **State:** NM **Zip:** 88220
Phone #:	720-384-7365 **Fax #:**
Project #:	03E15585539 **Project Owner:** XTO
Project Name:	Poker Lake Unit 274
Project Location:	32.22569, -103.93649
Sampler Name:	Azad Vojdani

BILL TO

P.O. #:	
Company:	XTO Energy Inc.
Attn:	~~Amy Ruth~~ AV 11/18 Colton Brown
Address:	3104 E. Greene St.
City:	Carlsbad
State:	NM **Zip:** 88220
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	CHLORIDE
H247045																		
1	FS01A	3'	C	1			✓					✓		11-18-24	1332	✓	✓	✓
2	FS06A	3'	C	1			✓					✓		↓	1334	✓	✓	✓

Relinquished By:	**Date:** 11-19-24	**Received By:**	
	Time: 1405		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Verbal Result: ☐ Yes ☒ No **Add'l Phone #:**

All Results are emailed. Please provide Email address:

TMorrissey@ensolum.com, Acole@ensolum.com

REMARKS:

API: 30-015-35138 AFE: PA.2023.04901.EXP.01 Incident #: Nab1512157315

Delivered By: (Circle One)	Observed Temp. °C 0.9	**Sample Condition** Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	**CHECKED BY: (Initials)**	**Turnaround Time:** Standard ☐ Rush ☒	**Bacteria (only) Sample Condition** Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.3			Thermometer ID #140 Correction Factor -0.5°C	Observed Temp. °C Corrected Temp. °C

24 TAT

11/19/24

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

ENSOLUM

APPENDIX C

May 8, 2019 *Deferral Request*

NAB1512157315

2RP-2978

XTO Energy Co.

DEFERAL REQUEST

Poker Lake Unit 274

Tank Battery

05/08/2019

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

May 8, 2019

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

RE: Deferral Request
Poker Lake Unit 274 Tank Battery
Remediation Permit Number 2RP-2978
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing excavation of impacted soil and confirmation soil sampling activities at the Poker Lake Unit (PLU) 274 Tank Battery (Site) in Unit O, Section 12, Township 24 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation and soil sampling activities was to address impacts to soil after a release of crude oil and produced water at the Site.

The release was discovered on April 20, 2015, and was the result of a failed connection on the water leg of the heater-treater. Approximately 13 barrels (bbls) of crude oil and 9 bbls of produced water were released within the process equipment containment, and a small area of pasture south of the well pad was affected by overspray. Approximately 3,700 square feet within the containment and pasture area south of the well pad were affected by the release. A vacuum truck was dispatched to the Site to recover the free-standing fluid; approximately 3 bbls of crude oil and 2 bbls of produced water were recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on April 24, 2015, and was assigned Remediation Permit (RP) Number 2RP-2978 (Attachment 1). Although this release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier III site in the Compliance Agreement, meaning remediation of the release began prior to August 14, 2018, the effective date of 19.15.29 NMAC, however remediation was ongoing. Based on the excavation activities and

results of the soil sampling events, XTO is submitting this deferral report, describing remediation that has occurred and requesting deferral of final remediation.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied the closure criteria in accordance with NMOCD Table 1, *Closure Criteria for Soils Impacted by a Release*. Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is United States Geological Survey (USGS) well 321321103544101 24S.30E.18.22144, located approximately 1.5 miles east of the Site, with a depth to groundwater of 168.08 feet bgs. The total depth of the water well is not determined. The water well is approximately 86 feet higher in elevation than the Site. The nearest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 700 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low karst zone. Based on these criteria, the following NMOCD Table 1 closure criteria were applied: 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 10,000 mg/kg chloride. A closure criteria of 600 mg/kg chloride was applied to the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation. Additionally, the final excavation and soil sampling activities were completed after a March 21, 2019, meeting between XTO and the U.S. Bureau of Land Management (BLM) during which BLM indicated a preferred chloride closure criteria of 600 mg/kg for the top 4 feet of all impacted areas on and off pad.

PRELIMINARY SOIL SAMPLING

During August 2018, an LTE scientist collected nine preliminary soil samples (SS01 through SS09) within the release area to assess the lateral extent of impacted soil. The soil sample locations, as depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet or 1 foot bgs. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States

Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS09 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and chloride concentrations were below 600 mg/kg. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2. Based on the soil sample analytical results and visible hydrocarbon staining, additional delineation activities were required to assess the vertical extent of impacted soil.

DELINEATION ACTIVITIES

During April 2019, LTE personnel returned to the Site to complete borehole delineation activities via hand auger. Boreholes were advanced at four of the preliminary soil sample locations (SS02 through SS05) and at three additional locations (SS10 through SS12) within the release area to further delineate the lateral and vertical extent of impacted soil. The boreholes were advanced to depths ranging from 1 foot to 2.5 feet bgs. Soil was field screened in the boreholes using a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected for laboratory analysis from each borehole SS02 through SS05, SS10, and SS11 from depths ranging from 1 foot to 2 feet bgs. Three delineation soil samples were collected for laboratory analysis from borehole SS12 from depths of 0.5 feet, 1 foot, and 2.5 feet bgs. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations and depths are depicted on Figure 2 and soil sample logs are included in Attachment 3.

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in delineation soil samples SS02A, SS04A, SS05A, SS10/SS10A, SS11/SS11A, and SS12B. Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the NMOCD Table 1 closure criteria in delineation soil samples SS03A, SS12, and SS12A, collected from boreholes SS03 and SS12. Laboratory analytical indicated that chloride concentrations were below 600 mg/kg in all delineation soil samples. Based on the laboratory analytical results, excavation was required in the pasture area south of the well pad in the area around borehole SS03. Excavation could not be completed in the area around borehole SS12 due to the proximity of active pipelines; therefore, the impacted soil was delineated vertically to 2.5 feet bgs by delineation soil sample SS12B. Based on visible hydrocarbon staining, excavation was warranted near the release point within the process equipment containment area. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

EXCAVATION ACTIVITIES

On April 30, 2019, an LTE scientist returned to the Site to oversee excavation of impacted soil as indicated by laboratory analytical results for delineation soil sample SS03A and visible hydrocarbon staining within the process equipment containment near the release point. To delineate impacts to soil and direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated in the pasture area south of the well pad around borehole SS03 to a depth of 4 feet bgs. Due to the presence of active process equipment and pipelines in the hydrocarbon stained area near the release point, impacted soil was excavated via hydrovac to the extent possible to a depth of 0.25 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples from the sidewalls and/or floor of the excavations. The 5-point composite soil samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

The excavation in the pasture area south of the well pad measured approximately 130 square feet in area with a depth of 4 feet bgs. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation from a depth of 0 to 4 feet bgs. Composite soil sample FS02 was collected from the floor of the excavation from a depth of 4 feet bgs.

The excavation within the process equipment containment area measured approximately 200 square feet in area with a depth of 0.25 feet bgs. Due to the shallow depth of the excavation, one composite soil sample (FS01) was collected from the floor of the excavation from a depth of 0.25 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco Laboratories in Midland, Texas.

The excavation soil sample locations and the horizontal extents of the excavations are presented on Figure 3. Approximately 20 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported to and properly disposed of at the Lea Land landfill facility in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS09, and delineation soil samples SS02A, SS04A, SS05A, SS10/SS10A, SS11/SS11A, and SS12B. Laboratory analytical indicated that chloride concentrations were below 600 mg/kg in all preliminary soil samples, delineation soil samples, and excavation soil samples.

Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the NMOCD Table 1 closure criteria in delineation soil samples SS03A, SS12, and SS12A collected from boreholes SS03 and SS12. The impacted soil was excavated from the area around borehole SS03, and laboratory analytical results for the subsequent excavation sidewall samples (SW01 and

SW02) and excavation floor sample (FS02) collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria, and no further excavation was required in this area.

Impacted soil was excavated to the extent possible in the hydrocarbon stained area within the process equipment containment, and laboratory analytical results for the subsequent excavation floor sample (FS01) collected from the final excavation extent indicated that GRO/DRO and TPH concentrations exceeded the NMOCD Table 1 closure criteria. Further excavation of impacted soil was limited by active process equipment and pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site process equipment and pipelines. This XTO safety policy is established to protect workers and to reduce the likelihood of compromising the foundation of the production equipment and pipelines. This policy was enforced where impacted soil was identified within two feet of active pipelines in delineation soil samples SS12 and SS12A and excavation soil sample FS01. Laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included in Attachment 2.

DEFERRAL REQUEST

A total of 20 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth-moving activities within 2-feet of active process equipment and pipelines. Laboratory analytical results for delineation soil samples SS12 and SS12A collected from borehole SS12 and excavation soil sample FS01 collected from the excavation within the process equipment containment area, indicated that soil with GRO/DRO and TPH concentrations exceeding the NMOCD Table 1 closure criteria was left in place within two feet of active pipelines. An estimated 50 cubic yards of impacted soil remain in place within the process equipment containment area beneath and around active pipelines assuming a maximum 2.5-foot depth based on soil sample SS12B that was compliant with the NMOCD Table 1 closure criteria. The impacted soil remaining in place is delineated laterally and vertically by soil samples SS02/SS02A, SS04/SS04A, SS05/SS05A, SS10/SS10A, SS11/SS11A, SS12B, SW02, and FS02.

XTO requests to backfill the existing excavations and complete remediation during any major future well pad construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The free-standing fluids were recovered during initial response activities, and no saturated soil remains in place. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests deferral of final remediation for RP Number 2RP-2978. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions. An updated NMOCD Form C-141 is included in Attachment 1. A photographic log of the Site is included in Attachment 4.

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.

Ashley L. Ager

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO Energy, Inc.
Michael Bratcher, NMOCD
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, U.S. Bureau of Land Management
Crystal Weaver, U.S. Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary and Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-2978)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sampling Logs
Attachment 4	Photographic Log

FIGURES

LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

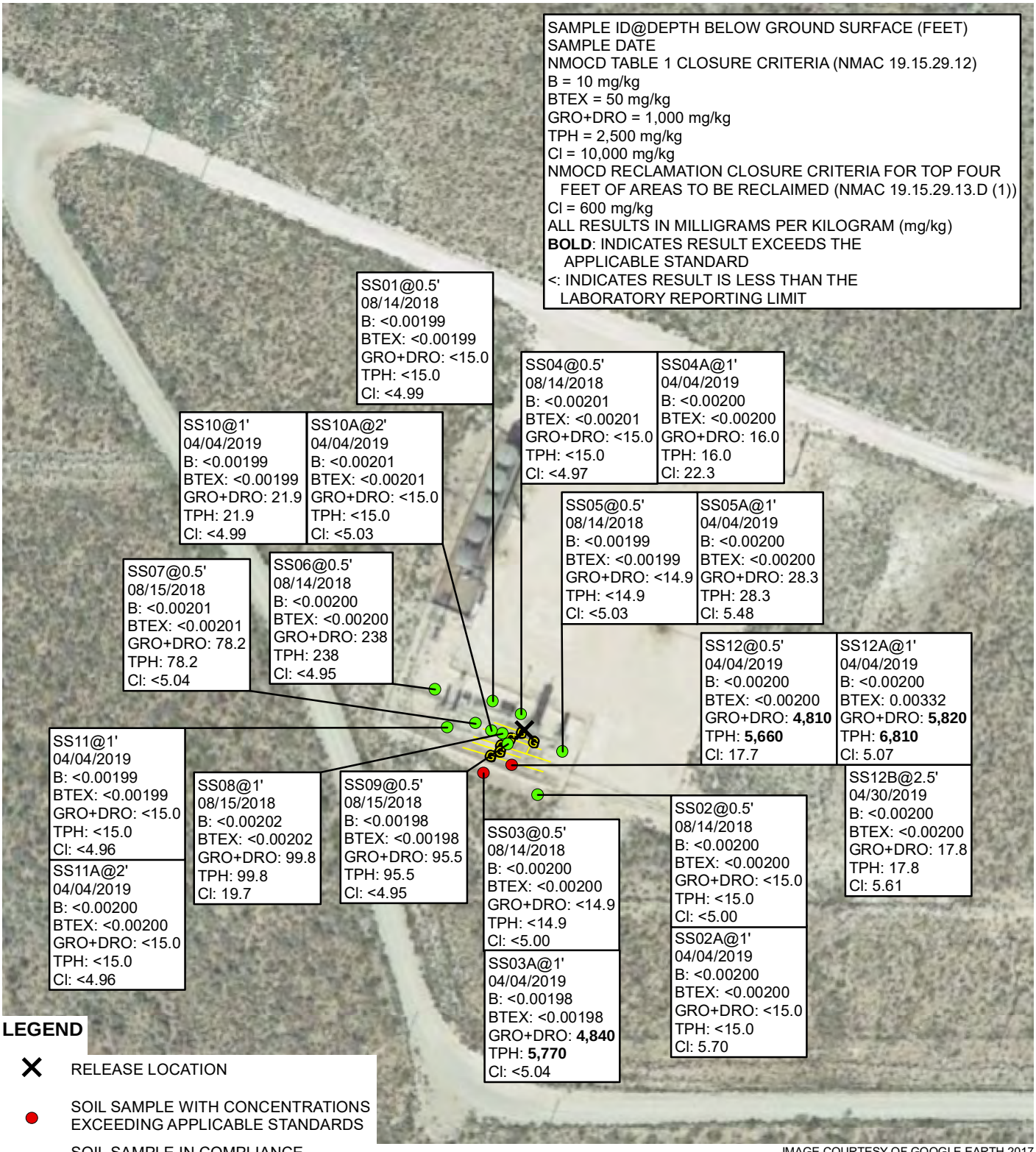
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-2978

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 274 TANK BATTERY
UNIT O SEC 12 T24S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

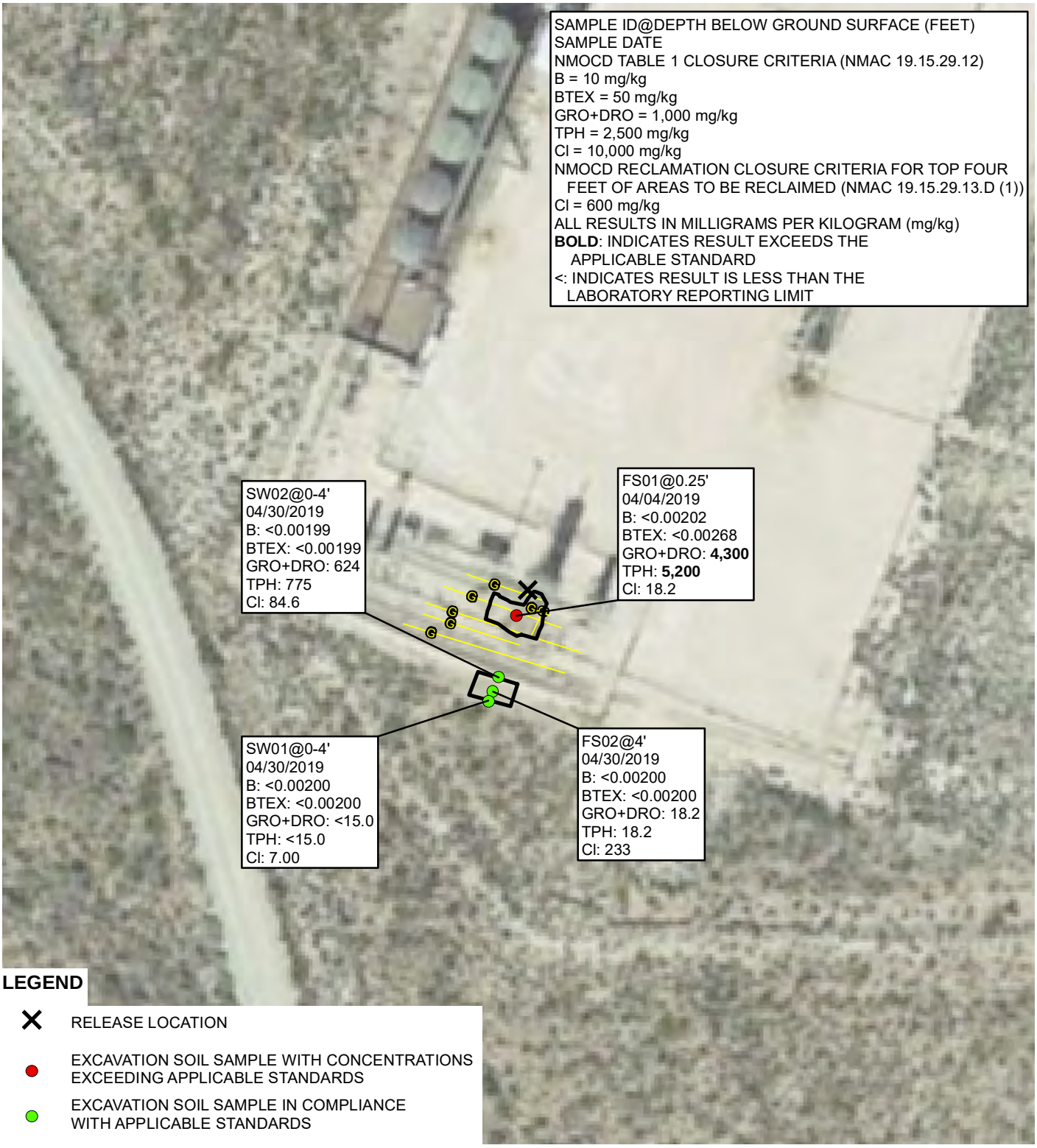
P:\XTO Energy\GIS\MXD\012918060_PLU-274 BATTERY\012918060_FIG01_SL_2018_2978.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-2978

FIGURE 2
PRELIMINARY AND DELINEATION
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 274 TANK BATTERY
UNIT O SEC 12 T24S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917041_PLU ROSS RANCH_33-25-30 TB\012918060_FIG02_PRELIM DELIN_2018_2978.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-2978

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 274 TANK BATTERY
UNIT O SEC 12 T24S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918060_PLU-274 BATTERY\012918060_FIG03_EXC_2978_1.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 274 TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-2978
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	08/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS02	0.5	08/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00*
SS03	0.5	08/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<5.00*
SS04	0.5	08/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS05	0.5	08/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<5.03
SS06	0.5	08/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	238	<15.0	238	238	<4.95
SS07	0.5	08/15/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	78.2	<15.0	78.2	78.2	<5.04
SS08	1	08/15/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	99.8	<15.0	99.8	99.8	19.7
SS09	0.5	08/15/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	95.5	<15.0	95.5	95.5	<4.95
SS10	1	04/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	21.9	<15.0	21.9	21.9	<4.99
SS11	1	04/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS12	0.5	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.8	4,810	851	**4,810**	**5,660**	17.7
SS02A	1	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5.70*
SS03A	1	04/04/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<74.9	4,840	927	**4,840**	**5,770**	<5.04*
SS04A	1	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	16.0	<15.0	16.0	16.0	22.3
SS05A	1	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	28.3	<15.0	28.3	28.3	5.48
SS10A	2	04/04/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
SS11A	2	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS12A	1	04/04/2019	<0.00200	0.00332	<0.00200	<0.00200	0.00332	<74.9	5,820	993	**5,820**	**6,810**	5.07
FS01	0.25	04/04/2019	<0.00202	0.00268	<0.00202	<0.00202	0.00268	<74.9	4,300	901	**4,300**	**5,200**	18.2
FS02	4	04/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	18.2	<15.0	18.2	18.2	233*
SW01	0 - 4	04/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.00*
SW02	0 - 4	04/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	624	151	624	775	84.6*
SS12B	2.5	04/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	17.8	<15.0	17.8	17.8	5.61
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**10,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-2978)

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 29 2015
RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1512157315

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Poker Lake Unit 274 Tank Battery	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-35138

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	12	24S	29E	360	South	2310	East	Eddy

Latitude: N 32.225443° **Longitude:** W 103.936917°

NATURE OF RELEASE

Type of Release: crude oil and produced water	Volume of Release: 13 bbls oil and 9 bbls water	Volume Recovered: 3 bbls oil and 2 bbls water
Source of Release: water leg connection on the heater treater failed	Date and Hour of Occurrence: 4/20/15 @ 12:24 pm	Date and Hour of Discovery: 4/20/15 @ 12:24 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD, BLM via email	
By Whom? Bradley Blevins	Date and Hour: 4/21/15 @ 10:07 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse: Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.*
A connection on the water leg of the heater treater failed. The connection was repaired.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 3,700 sq. ft. of tank battery and well pad area including an area misted on the south side of the tank battery location. Vacuum truck recovered 5 bbls of fluid. The area will be remediated in accordance with the NMOCD and BLM remediation guidelines.

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: Bradley Blevins	OIL CONSERVATION DIVISION
Printed Name: Bradley Blevins	Approved by Environmental Specialist:
Title: Assistant Remediation Foreman	Approval Date: 5/1/15 Expiration Date:
E-mail Address: bblevins@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 6/1/15 Attached ☐
Date: 4-24-15 Phone: 432-214-3704	

* Attach Additional Sheets If Necessary

2RP-2978

Patterson, Heather, EMNRD

From: Blevins, Bradley <BBlevins@BassPet.Com>
Sent: Tuesday, April 21, 2015 10:07 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD; Amos, James
Cc: Blevins, Bradley; Savoie, Tony A.
Subject: PLU 274 Release
Attachments: photo.jpg

All,

BOPCO EHS was notified of a release at the PLU 274 Battery. A connection on the water leg of the heater treater failed releasing fluid to the ground surface. All of the free standing fluid remained inside the firewall containment area. A small area south of the production equipment does have some overspray, this area will be micro blazed. I will follow up with an initial C-141, if you have any questions please let me know. Thanks
13 barrels of oil was released
9 barrels of PW was released
5 barrels of fluid was recovered by vacuum truck.

Brad Blevins
Assistant Remediation Foreman
BOPCO, LP
522 W. Mermod, Suite 704
Carlsbad, NM 88220
Office-575-887-7329
Cell-1-432-214-3704
bblevins@basspet.com

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-2978
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-2978
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.225443 Longitude -103.936917
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Poker Lake Unit 274 Tank Battery	Site Type: Exploration and Production
Date Release Discovered: 4/20/15	API# *(if applicable):* 30-015-35138

Unit Letter	Section	Township	Range	County
O	12	24S	29E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 13 bbls	Volume Recovered (bbls): 3 bbls
☒ Produced Water	Volume Released (bbls): 9 bbls	Volume Recovered (bbls): 2 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
A connection on the water leg of the heater treater failed. All of the free standing fluid remained inside the firewall containment area. The release impacted approximately 3,700 sq. ft. of tank battery and well pad area including an area misted on the south side of the tank battery location. A vacuum truck recovered 5 bbls of fluid.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2978
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? Released volume was less than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: _____ Date: 5/8/2019

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2978
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2978
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 5/8/2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2978
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: _____ Date: 5/8/2019

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

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

SEE BELOW

Signature: Bradford Billings Date: 03/19/2020

Deferral is approved, as only very small area was not verticallydefined, and other close by sample aeas were vertically delineated. Please make OCD aware of any timing that might llow for final delineation and remediation.

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 596508

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 274

28-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), 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 (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
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)

28-AUG-18

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

Reference: XENCO Report No(s): **596508**
PLU 274
Project Address: Carlsbad, NM

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) 596508. 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. 596508 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08-14-18 11:45	6 In	596508-001
SS02	S	08-14-18 12:05	6 In	596508-002
SS03	S	08-14-18 12:10	6 In	596508-003
SS04	S	08-14-18 14:10	6 In	596508-004
SS05	S	08-14-18 14:40	6 In	596508-005
SS06	S	08-14-18 15:45	6 In	596508-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 274

Project ID:
Work Order Number(s): *596508*

Report Date: *28-AUG-18*
Date Received: *08/21/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061240 Inorganic Anions by EPA 300
Nitrate as N RPD was outside laboratory control limits.
Samples in the analytical batch are: 596508-001

Batch: LBA-3061402 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 596508

LT Environmental, Inc., Arvada, CO

Project Name: PLU 274

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Tue Aug-21-18 12:57 pm
Report Date: 28-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	596508-001		596508-002		596508-003		596508-004		596508-005		596508-006	
	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	
	Depth:	6- In		6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-18 11:45		Aug-14-18 12:05		Aug-14-18 12:10		Aug-14-18 14:10		Aug-14-18 14:40		Aug-14-18 15:45	
BTEX by EPA 8021B	*Extracted:*	Aug-27-18 12:00		Aug-27-18 12:00		Aug-27-18 12:00		Aug-27-18 12:00		Aug-27-18 12:00		Aug-27-18 12:00	
	Analyzed:	Aug-27-18 19:12		Aug-27-18 19:32		Aug-27-18 19:52		Aug-27-18 20:13		Aug-27-18 20:33		Aug-27-18 20:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Aug-24-18 13:00		Aug-24-18 14:30		Aug-24-18 14:30		Aug-24-18 14:30		Aug-24-18 14:30		Aug-24-18 14:30	
	Analyzed:	Aug-24-18 17:33		Aug-24-18 19:08		Aug-24-18 20:25		Aug-24-18 19:30		Aug-24-18 19:35		Aug-24-18 19:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	<5.00	5.00	<5.00	5.00	<4.97	4.97	<5.03	5.03	<4.95	4.95
TPH by SW8015 Mod	*Extracted:*	Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00	
	Analyzed:	Aug-23-18 22:54		Aug-23-18 23:13		Aug-24-18 00:13		Aug-24-18 00:32		Aug-24-18 00:52		Aug-24-18 01:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	238	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	238	15.0

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-001	Date Collected:	08.14.18 11.45	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 13.00	Basis:	Wet Weight
Seq Number:	3061240				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.24.18 17.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.23.18 22.54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 22.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.23.18 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.23.18 22.54	
o-Terphenyl	84-15-1	95	%	70-135	08.23.18 22.54	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-001	Date Collected:	08.14.18 11.45	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.27.18 19.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.27.18 19.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.27.18 19.12	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.27.18 19.12	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-002	Date Collected:	08.14.18 12.05	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 14.30	Basis:	Wet Weight
Seq Number:	3061247				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.24.18 19.08	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.23.18 23.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.23.18 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.23.18 23.13	
o-Terphenyl	84-15-1	89	%	70-135	08.23.18 23.13	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-002	Date Collected:	08.14.18 12.05	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.27.18 19.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.18 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	08.27.18 19.32	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.27.18 19.32	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-003	Date Collected:	08.14.18 12.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 14.30	Basis:	Wet Weight
Seq Number:	3061247				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.24.18 20.25	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.24.18 00.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.24.18 00.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.24.18 00.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.24.18 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.24.18 00.13	
o-Terphenyl	84-15-1	91	%	70-135	08.24.18 00.13	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-003	Date Collected:	08.14.18 12.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.27.18 19.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.18 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.27.18 19.52	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.18 19.52	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-004	Date Collected:	08.14.18 14.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 14.30	Basis:	Wet Weight
Seq Number:	3061247				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.24.18 19.30	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 00.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 00.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 00.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.24.18 00.32	
o-Terphenyl	84-15-1	96	%	70-135	08.24.18 00.32	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-004	Date Collected:	08.14.18 14.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.27.18 20.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.27.18 20.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	08.27.18 20.13	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.18 20.13	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-005	Date Collected:	08.14.18 14.40	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 14.30	Basis:	Wet Weight
Seq Number:	3061247				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.24.18 19.35	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.24.18 00.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.24.18 00.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.24.18 00.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.24.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.24.18 00.52	
o-Terphenyl	84-15-1	93	%	70-135	08.24.18 00.52	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-005	Date Collected:	08.14.18 14.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.27.18 20.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.27.18 20.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.27.18 20.33	
1,4-Difluorobenzene	540-36-3	82	%	70-130	08.27.18 20.33	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-006	Date Collected:	08.14.18 15.45	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.24.18 14.30	Basis:	Wet Weight
Seq Number:	3061247				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.24.18 19.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**238**	15.0	mg/kg	08.24.18 01.12		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 01.12	U	1
Total TPH	PHC635	**238**	15.0	mg/kg	08.24.18 01.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.24.18 01.12	
o-Terphenyl	84-15-1	98	%	70-135	08.24.18 01.12	

Certificate of Analytical Results 596508

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.21.18 12.57
Lab Sample Id:	596508-006	Date Collected:	08.14.18 15.45	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.18 20.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.18 20.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.27.18 20.53	
1,4-Difluorobenzene	540-36-3	93	%	70-130	08.27.18 20.53	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 596508

LT Environmental, Inc.

PLU 274

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061240 — Matrix: Solid — Date Prep: 08.24.18
MB Sample Id: 7661143-1-BLK — LCS Sample Id: 7661143-1-BKS — LCSD Sample Id: 7661143-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	242	97	245	98	90-110	1	20	mg/kg	08.24.18 14:27	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061247 — Matrix: Solid — Date Prep: 08.24.18
MB Sample Id: 7661148-1-BLK — LCS Sample Id: 7661148-1-BKS — LCSD Sample Id: 7661148-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	243	97	247	99	90-110	2	20	mg/kg	08.24.18 18:57	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061240 — Matrix: Soil — Date Prep: 08.24.18
Parent Sample Id: 596790-001 — MS Sample Id: 596790-001 S — MSD Sample Id: 596790-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.32	250	250	97	250	97	90-110	0	20	mg/kg	08.24.18 14:44	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061240 — Matrix: Soil — Date Prep: 08.24.18
Parent Sample Id: 596977-003 — MS Sample Id: 596977-003 S — MSD Sample Id: 596977-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	623	251	835	84	833	84	90-110	0	20	mg/kg	08.24.18 16:27	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3061247 — Matrix: Soil — Date Prep: 08.24.18
Parent Sample Id: 596508-002 — MS Sample Id: 596508-002 S — MSD Sample Id: 596508-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	246	98	245	98	90-110	0	20	mg/kg	08.24.18 19:14	

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

QC Summary 596508

LT Environmental, Inc.

PLU 274

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3061247 Matrix: Soil Date Prep: 08.24.18
Parent Sample Id: 596508-003 MS Sample Id: 596508-003 S MSD Sample Id: 596508-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	244	98	244	98	90-110	0	20	mg/kg	08.24.18 20:30	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3061132 Matrix: Solid Date Prep: 08.23.18
MB Sample Id: 7661027-1-BLK LCS Sample Id: 7661027-1-BKS LCSD Sample Id: 7661027-1-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	967	97	945	95	70-135	2	20	mg/kg	08.23.18 18:59	
Diesel Range Organics (DRO)	<15.0	1000	1000	100	970	97	70-135	3	20	mg/kg	08.23.18 18:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		119		116		70-135	%	08.23.18 18:59
o-Terphenyl	99		99		94		70-135	%	08.23.18 18:59

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3061132 Matrix: Soil Date Prep: 08.23.18
Parent Sample Id: 596598-001 MS Sample Id: 596598-001 S MSD Sample Id: 596598-001 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)	27.6	1000	920	89	938	91	70-135	2	20	mg/kg	08.23.18 19:57	
Diesel Range Organics (DRO)	233	1000	1120	89	1140	91	70-135	2	20	mg/kg	08.23.18 19:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		123		70-135	%	08.23.18 19:57
o-Terphenyl	106		106		70-135	%	08.23.18 19:57

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

QC Summary 596508

LT Environmental, Inc.

PLU 274

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3061402 Matrix: Solid Date Prep: 08.27.18

MB Sample Id: 7661244-1-BLK LCS Sample Id: 7661244-1-BKS LCSD Sample Id: 7661244-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.103	102	70-130	5	35	mg/kg	08.27.18 14:54	
Toluene	<0.00200	0.100	0.104	104	0.104	103	70-130	0	35	mg/kg	08.27.18 14:54	
Ethylbenzene	<0.00200	0.100	0.115	115	0.110	109	70-130	4	35	mg/kg	08.27.18 14:54	
m,p-Xylenes	<0.00401	0.200	0.223	112	0.211	104	70-130	6	35	mg/kg	08.27.18 14:54	
o-Xylene	<0.00200	0.100	0.103	103	0.0973	96	70-130	6	35	mg/kg	08.27.18 14:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		98		91		70-130	%	08.27.18 14:54
4-Bromofluorobenzene	94		94		91		70-130	%	08.27.18 14:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3061402 Matrix: Soil Date Prep: 08.27.18

Parent Sample Id: 596507-003 MS Sample Id: 596507-003 S MSD Sample Id: 596507-003 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	0.0998	0.0749	75	0.0881	88	70-130	16	35	mg/kg	08.27.18 15:36	
Toluene	<0.00200	0.0998	0.0548	55	0.0952	95	70-130	54	35	mg/kg	08.27.18 15:36	XF
Ethylbenzene	<0.00200	0.0998	0.0424	42	0.0811	81	70-130	63	35	mg/kg	08.27.18 15:36	XF
m,p-Xylenes	<0.00399	0.200	0.0800	40	0.156	78	70-130	64	35	mg/kg	08.27.18 15:36	XF
o-Xylene	<0.00200	0.0998	0.0377	38	0.0700	70	70-130	60	35	mg/kg	08.27.18 15:36	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		78		70-130	%	08.27.18 15:36
4-Bromofluorobenzene	94		93		70-130	%	08.27.18 15:36

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

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www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 596508

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705
Email: Abaker@ltenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU 274
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-2978

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	EPA 8015	TAT	Chloride 300.1	Field Comments
1	SS01	6"	8/14/18	1146	S	2								X	X	X	X	X	
2	SS02			1205										X	X	X	X	X	
3	SS03			1210										X	X	X	X	X	
4	SS04			1410										X	X	X	X	X	
5	SS05			1440										X	X	X	X	X	
6	SS06			1545										X	X	X	X	X	
7																			
8			8/14/18	BB															
9																			
10																			

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8/20/18 1200		2	8/21/18 1257	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5			9.5 / 0.0

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 any losses or expenses incurred by the Client if such loses 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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/21/2018 12:57:00 PM

Work Order #: 596508

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)?	9.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**N/A**
#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: 08/21/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/22/2018

Jessica Kramer

Analytical Report 596507

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 274

28-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), 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 (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
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)

28-AUG-18

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

Reference: XENCO Report No(s): **596507**
PLU 274
Project Address: Carlsbad, NM

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) 596507. 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. 596507 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

Sample Cross Reference 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS07	S	08-15-18 10:47	6 In	596507-001
SS08	S	08-15-18 15:00	1 ft	596507-002
SS09	S	08-15-18 10:30	6 In	596507-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 274

Project ID:
Work Order Number(s): *596507*

Report Date: *28-AUG-18*
Date Received: *08/21/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061402 BTEX by EPA 8021B
Lab Sample ID 596507-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 596507-001, -002, -003.
The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 596507-001, -002, -003
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 596507

LT Environmental, Inc., Arvada, CO

Project Name: PLU 274

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Tue Aug-21-18 12:56 pm
Report Date: 28-AUG-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	596507-001		596507-002		596507-003					
	Field Id:	SS07		SS08		SS09					
	Depth:	6- In		1- ft		6- In					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Aug-15-18 10:47		Aug-15-18 15:00		Aug-15-18 10:30					
BTEX by EPA 8021B	***Extracted:***	Aug-27-18 12:00		Aug-27-18 12:00		Aug-27-18 12:00					
	Analyzed:	Aug-27-18 18:11		Aug-27-18 18:31		Aug-27-18 18:51					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00397	0.00397				
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198				
Inorganic Anions by EPA 300	***Extracted:***	Aug-22-18 16:45		Aug-22-18 16:45		Aug-22-18 16:45					
	Analyzed:	Aug-22-18 22:52		Aug-22-18 22:57		Aug-22-18 23:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<5.04	5.04	19.7	5.03	<4.95	4.95				
TPH by SW8015 Mod	***Extracted:***	Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00					
	Analyzed:	Aug-23-18 21:55		Aug-23-18 22:14		Aug-23-18 22:34					
	Units/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				
Diesel Range Organics (DRO)		78.2	15.0	99.8	15.0	95.5	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		78.2	15.0	99.8	15.0	95.5	15.0				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-001	Date Collected:	08.15.18 10.47	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.22.18 16.45	Basis:	Wet Weight
Seq Number:	3060979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	08.22.18 22.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 21.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**78.2**	15.0	mg/kg	08.23.18 21.55		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 21.55	U	1
Total TPH	PHC635	**78.2**	15.0	mg/kg	08.23.18 21.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.23.18 21.55	
o-Terphenyl	84-15-1	101	%	70-135	08.23.18 21.55	

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-001	Date Collected:	08.15.18 10.47	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.27.18 18.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.27.18 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.27.18 18.11	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.27.18 18.11	

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-002	Date Collected:	08.15.18 15.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.22.18 16.45	Basis:	Wet Weight
Seq Number:	3060979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.7**	5.03	mg/kg	08.22.18 22.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 22.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**99.8**	15.0	mg/kg	08.23.18 22.14		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 22.14	U	1
Total TPH	PHC635	**99.8**	15.0	mg/kg	08.23.18 22.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.23.18 22.14	
o-Terphenyl	84-15-1	97	%	70-135	08.23.18 22.14	

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-002	Date Collected:	08.15.18 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.27.18 18.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.27.18 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.27.18 18.31	
1,4-Difluorobenzene	540-36-3	91	%	70-130	08.27.18 18.31	

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-003	Date Collected:	08.15.18 10.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.22.18 16.45	Basis:	Wet Weight
Seq Number:	3060979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.22.18 23.03	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.23.18 15.00	Basis:	Wet Weight
Seq Number:	3061132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 22.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**95.5**	15.0	mg/kg	08.23.18 22.34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 22.34	U	1
Total TPH	PHC635	**95.5**	15.0	mg/kg	08.23.18 22.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.23.18 22.34	
o-Terphenyl	84-15-1	94	%	70-135	08.23.18 22.34	

Certificate of Analytical Results 596507

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	08.21.18 12.56
Lab Sample Id:	596507-003	Date Collected:	08.15.18 10.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.27.18 12.00	Basis:	Wet Weight
Seq Number:	3061402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.27.18 18.51	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.27.18 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	08.27.18 18.51	
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.27.18 18.51	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 596507

LT Environmental, Inc.

PLU 274

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3060979 — Matrix: Solid — Date Prep: 08.22.18
MB Sample Id: 7660911-1-BLK — LCS Sample Id: 7660911-1-BKS — LCSD Sample Id: 7660911-1-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	247	99	248	99	90-110	0	20	mg/kg	08.22.18 20:40	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3060979 — Matrix: Soil — Date Prep: 08.22.18
Parent Sample Id: 596494-002 — MS Sample Id: 596494-002 S — MSD Sample Id: 596494-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.43	248	262	103	262	103	90-110	0	20	mg/kg	08.22.18 20:56	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3060979 — Matrix: Soil — Date Prep: 08.22.18
Parent Sample Id: 596494-012 — MS Sample Id: 596494-012 S — MSD Sample Id: 596494-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	193	251	443	100	440	98	90-110	1	20	mg/kg	08.22.18 22:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061132 — Matrix: Solid — Date Prep: 08.23.18
MB Sample Id: 7661027-1-BLK — LCS Sample Id: 7661027-1-BKS — LCSD Sample Id: 7661027-1-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	967	97	945	95	70-135	2	20	mg/kg	08.23.18 18:59	
Diesel Range Organics (DRO)	<15.0	1000	1000	100	970	97	70-135	3	20	mg/kg	08.23.18 18:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		119		116		70-135	%	08.23.18 18:59
o-Terphenyl	99		99		94		70-135	%	08.23.18 18:59

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

QC Summary 596507

LT Environmental, Inc.

PLU 274

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3061132 | Matrix: Soil | Date Prep: 08.23.18
Parent Sample Id: 596598-001 | MS Sample Id: 596598-001 S | MSD Sample Id: 596598-001 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)	27.6	1000	920	89	938	91	70-135	2	20	mg/kg	08.23.18 19:57	
Diesel Range Organics (DRO)	233	1000	1120	89	1140	91	70-135	2	20	mg/kg	08.23.18 19:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		123		70-135	%	08.23.18 19:57
o-Terphenyl	106		106		70-135	%	08.23.18 19:57

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061402 | Matrix: Solid | Date Prep: 08.27.18
MB Sample Id: 7661244-1-BLK | LCS Sample Id: 7661244-1-BKS | LCSD Sample Id: 7661244-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.103	102	70-130	5	35	mg/kg	08.27.18 14:54	
Toluene	<0.00200	0.100	0.104	104	0.104	103	70-130	0	35	mg/kg	08.27.18 14:54	
Ethylbenzene	<0.00200	0.100	0.115	115	0.110	109	70-130	4	35	mg/kg	08.27.18 14:54	
m,p-Xylenes	<0.00401	0.200	0.223	112	0.211	104	70-130	6	35	mg/kg	08.27.18 14:54	
o-Xylene	<0.00200	0.100	0.103	103	0.0973	96	70-130	6	35	mg/kg	08.27.18 14:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		98		91		70-130	%	08.27.18 14:54
4-Bromofluorobenzene	94		94		91		70-130	%	08.27.18 14:54

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061402 | Matrix: Soil | Date Prep: 08.27.18
Parent Sample Id: 596507-003 | MS Sample Id: 596507-003 S | MSD Sample Id: 596507-003 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	0.0998	0.0749	75	0.0881	88	70-130	16	35	mg/kg	08.27.18 15:36	
Toluene	<0.00200	0.0998	0.0548	55	0.0952	95	70-130	54	35	mg/kg	08.27.18 15:36	XF
Ethylbenzene	<0.00200	0.0998	0.0424	42	0.0811	81	70-130	63	35	mg/kg	08.27.18 15:36	XF
m,p-Xylenes	<0.00399	0.200	0.0800	40	0.156	78	70-130	64	35	mg/kg	08.27.18 15:36	XF
o-Xylene	<0.00200	0.0998	0.0377	38	0.0700	70	70-130	60	35	mg/kg	08.27.18 15:36	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		78		70-130	%	08.27.18 15:36
4-Bromofluorobenzene	94		93		70-130	%	08.27.18 15:36

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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CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 596507

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office

Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705

Email: Abaker@ltenv.com

Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name Joseph S. Hernandez

Project Information

Project Name/Number: PLU 274

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: ZRP 2978

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Preserved: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 8020	TPH EPA 8015	Chloride 300.1
1	SS07	6"	8/15/18	1047	S	1								X	X	X	X
2	SS08	1'	↓	1500	↓	↓								X	X	X	X
3	SS09	6"	↓	1030	↓	↓								X	X	X	X
4																	
5							8/15/18										
6																	
7																	
8																	
9																	
10																	

Matrix Codes: W = Water; S = Soil/Sed/Solid; GW = Ground Water; DW = Drinking Water; P = Product; SW = Surface water; SL = Sludge; OW = Ocean/Sea Water; WI = Wipe; O = Oil; WW = Waste Water; A = Air

Field Comments

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [X] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8/20/18 800				
2					8/21 1256	8/21/18
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						1256
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						9.5 R8 0.0

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 any losses or expenses incurred by the Client if such loses 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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/21/2018 12:56:00 PM

Work Order #: 596507

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)?	9.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**N/A**
#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: 08/21/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/22/2018

Jessica Kramer

Analytical Report 620366

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 274

15-APR-19

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), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

15-APR-19

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

Reference: XENCO Report No(s): **620366**
PLU 274
Project Address: ---

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) 620366. 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. 620366 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kalei Stout
Midland Laboratory Director

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

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

Sample Cross Reference 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	04-04-19 12:10	0.25 ft	620366-001
SS04A	S	04-04-19 12:30	1 ft	620366-002
SS10	S	04-04-19 12:40	1 ft	620366-003
SS10A	S	04-04-19 12:50	2 ft	620366-004
SS11	S	04-04-19 13:00	1 ft	620366-005
SS11A	S	04-04-19 13:10	2 ft	620366-006
SS12	S	04-04-19 13:20	0.5 ft	620366-007
SS12A	S	04-04-19 13:30	1 ft	620366-008
SS03A	S	04-04-19 13:40	1 ft	620366-009
SS02A	S	04-04-19 13:50	1 ft	620366-010
SS05A	S	04-04-19 14:00	1 ft	620366-011

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 274

Project ID: ---
Work Order Number(s): *620366*

Report Date: *15-APR-19*
Date Received: *04/08/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085437 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected;
Samples affected are: 620366-001,620366-008,620366-007.

Batch: LBA-3085551 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3085721 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 620366-010 SD.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 620366-009, -010, -011

Lab Sample ID 620366-010 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 620366-009, -010, -011.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 620366

LT Environmental, Inc., Arvada, CO

Project Name: PLU 274

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Mon Apr-08-19 01:55 pm
Report Date: 15-APR-19
Project Manager: Kalei Stout

Analysis Requested		620366-001		620366-002		620366-003		620366-004		620366-005		620366-006	
	Field Id:	FS01		SS04A		SS10		SS10A		SS11		SS11A	
	Depth:	0.25- ft		1- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-04-19 12:10		Apr-04-19 12:30		Apr-04-19 12:40		Apr-04-19 12:50		Apr-04-19 13:00		Apr-04-19 13:10	
BTEX by EPA 8021B	*Extracted:*	Apr-11-19 17:00		Apr-11-19 17:00		Apr-11-19 17:00		Apr-11-19 17:00		Apr-11-19 17:00		Apr-11-19 17:00	
	Analyzed:	Apr-13-19 01:39		Apr-13-19 01:58		Apr-13-19 02:17		Apr-13-19 02:36		Apr-13-19 02:55		Apr-13-19 03:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		0.00268	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		0.00268	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45	
	Analyzed:	Apr-14-19 13:49		Apr-14-19 13:56		Apr-14-19 14:04		Apr-15-19 07:48		Apr-14-19 14:47		Apr-14-19 14:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		18.2	4.98	22.3	5.04	<4.99	4.99	<5.03	5.03	<4.96	4.96	<4.96	4.96
TPH by SW8015 Mod	*Extracted:*	Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00	
	Analyzed:	Apr-12-19 00:20		Apr-12-19 00:39		Apr-12-19 01:38		Apr-12-19 01:58		Apr-12-19 02:17		Apr-12-19 02:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<74.9	74.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		4300	74.9	16.0	15.0	21.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		901	74.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		5200	74.9	16.0	15.0	21.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		4300	74.9	16.0	15.0	21.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Kalei Stout
Midland Laboratory Director

Final 1.000

Certificate of Analysis Summary 620366

LT Environmental, Inc., Arvada, CO

Project Name: PLU 274

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Mon Apr-08-19 01:55 pm
Report Date: 15-APR-19
Project Manager: Kalei Stout

Analysis Requested											
	Lab Id:	620366-007		620366-008		620366-009		620366-010		620366-011	
	Field Id:	SS12		SS12A		SS03A		SS02A		SS05A	
	Depth:	0.5- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-04-19 13:20		Apr-04-19 13:30		Apr-04-19 13:40		Apr-04-19 13:50		Apr-04-19 14:00	
BTEX by EPA 8021B	***Extracted:***	Apr-11-19 17:00		Apr-11-19 17:00		Apr-14-19 16:19		Apr-14-19 16:19		Apr-14-19 16:19	
	Analyzed:	Apr-13-19 03:33		Apr-13-19 03:52		Apr-15-19 12:33		Apr-15-19 05:43		Apr-15-19 06:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	0.00332	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00399	0.00399	<0.00397	0.00397	<0.00401	0.00401	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	0.00332	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45		Apr-10-19 16:45	
	Analyzed:	Apr-14-19 15:02		Apr-14-19 15:09		Apr-14-19 15:16		Apr-14-19 15:23		Apr-14-19 15:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		17.7	4.96	5.07	4.99	<5.04	5.04	5.70	4.98	5.48	5.04
TPH by SW8015 Mod	***Extracted:***	Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 16:00	
	Analyzed:	Apr-12-19 02:57		Apr-12-19 03:16		Apr-12-19 03:36		Apr-12-19 03:56		Apr-12-19 04:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<74.8	74.8	<74.9	74.9	<74.9	74.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		4810	74.8	5820	74.9	4840	74.9	<15.0	15.0	28.3	15.0
Motor Oil Range Hydrocarbons (MRO)		851	74.8	993	74.9	927	74.9	<15.0	15.0	<15.0	15.0
Total TPH		5660	74.8	6810	74.9	5770	74.9	<15.0	15.0	28.3	15.0
Total GRO-DRO		4810	74.8	5820	74.9	4840	74.9	<15.0	15.0	28.3	15.0

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

Kalei Stout
Midland Laboratory Director

Final 1.000

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-001	Date Collected:	04.04.19 12.10	Sample Depth:	0.25 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.2**	4.98	mg/kg	04.14.19 13.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	04.12.19 00.20	U	5
Diesel Range Organics (DRO)	C10C28DRO	**4300**	74.9	mg/kg	04.12.19 00.20		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**901**	74.9	mg/kg	04.12.19 00.20		5
Total TPH	PHC635	**5200**	74.9	mg/kg	04.12.19 00.20		5
Total GRO-DRO	PHC628	**4300**	74.9	mg/kg	04.12.19 00.20		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	04.12.19 00.20	
o-Terphenyl	84-15-1	142	%	70-135	04.12.19 00.20	**

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-001	Date Collected:	04.04.19 12.10	Sample Depth:	0.25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.13.19 01.39	U	1
Toluene	108-88-3	**0.00268**	0.00202	mg/kg	04.13.19 01.39		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.13.19 01.39	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.13.19 01.39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.13.19 01.39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.13.19 01.39	U	1
Total BTEX		**0.00268**	0.00202	mg/kg	04.13.19 01.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.13.19 01.39	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.13.19 01.39	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-002	Date Collected:	04.04.19 12.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.3**	5.04	mg/kg	04.14.19 13.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 00.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.0**	15.0	mg/kg	04.12.19 00.39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 00.39	U	1
Total TPH	PHC635	**16.0**	15.0	mg/kg	04.12.19 00.39		1
Total GRO-DRO	PHC628	**16.0**	15.0	mg/kg	04.12.19 00.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.12.19 00.39	
o-Terphenyl	84-15-1	92	%	70-135	04.12.19 00.39	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-002	Date Collected:	04.04.19 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.13.19 01.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.13.19 01.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.13.19 01.58	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.13.19 01.58	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS10**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-003	Date Collected:	04.04.19 12.40	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.14.19 14.04	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 01.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	**21.9**	15.0	mg/kg	04.12.19 01.38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 01.38	U	1
Total TPH	PHC635	**21.9**	15.0	mg/kg	04.12.19 01.38		1
Total GRO-DRO	PHC628	**21.9**	15.0	mg/kg	04.12.19 01.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.12.19 01.38	
o-Terphenyl	84-15-1	96	%	70-135	04.12.19 01.38	

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Sample Id:	**SS10**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-003	Date Collected:	04.04.19 12.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.13.19 02.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.13.19 02.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	04.13.19 02.17	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.13.19 02.17	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SS10A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-004	Date Collected:	04.04.19 12.50	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	04.15.19 07.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 01.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.12.19 01.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 01.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.12.19 01.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.12.19 01.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.12.19 01.58	
o-Terphenyl	84-15-1	93	%	70-135	04.12.19 01.58	

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Sample Id:	**SS10A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-004	Date Collected:	04.04.19 12.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.13.19 02.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.13.19 02.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.13.19 02.36	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.13.19 02.36	

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Sample Id:	**SS11**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-005	Date Collected:	04.04.19 13.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	04.14.19 14.47	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 02.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.12.19 02.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 02.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.12.19 02.17	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.12.19 02.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.12.19 02.17	
o-Terphenyl	84-15-1	96	%	70-135	04.12.19 02.17	

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Sample Id:	**SS11**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-005	Date Collected:	04.04.19 13.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.13.19 02.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.13.19 02.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.13.19 02.55	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.13.19 02.55	

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Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-006	Date Collected:	04.04.19 13.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	04.14.19 14.54	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 02.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.12.19 02.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 02.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.12.19 02.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.12.19 02.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.12.19 02.37	
o-Terphenyl	84-15-1	96	%	70-135	04.12.19 02.37	

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Sample Id:	**SS11A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-006	Date Collected:	04.04.19 13.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.13.19 03.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.13.19 03.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.13.19 03.14	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.13.19 03.14	

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Sample Id:	**SS12**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-007	Date Collected:	04.04.19 13.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.7**	4.96	mg/kg	04.14.19 15.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.8	74.8	mg/kg	04.12.19 02.57	U	5
Diesel Range Organics (DRO)	C10C28DRO	**4810**	74.8	mg/kg	04.12.19 02.57		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**851**	74.8	mg/kg	04.12.19 02.57		5
Total TPH	PHC635	**5660**	74.8	mg/kg	04.12.19 02.57		5
Total GRO-DRO	PHC628	**4810**	74.8	mg/kg	04.12.19 02.57		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.12.19 02.57	
o-Terphenyl	84-15-1	166	%	70-135	04.12.19 02.57	**

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Sample Id:	**SS12**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-007	Date Collected:	04.04.19 13.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.13.19 03.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.13.19 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.13.19 03.33	
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.13.19 03.33	

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Sample Id:	**SS12A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-008	Date Collected:	04.04.19 13.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.07**	4.99	mg/kg	04.14.19 15.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	04.12.19 03.16	U	5
Diesel Range Organics (DRO)	C10C28DRO	**5820**	74.9	mg/kg	04.12.19 03.16		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**993**	74.9	mg/kg	04.12.19 03.16		5
Total TPH	PHC635	**6810**	74.9	mg/kg	04.12.19 03.16		5
Total GRO-DRO	PHC628	**5820**	74.9	mg/kg	04.12.19 03.16		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.12.19 03.16	
o-Terphenyl	84-15-1	166	%	70-135	04.12.19 03.16	**

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Sample Id:	**SS12A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-008	Date Collected:	04.04.19 13.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 17.00	Basis:	Wet Weight
Seq Number:	3085551				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.13.19 03.52	U	1
Toluene	108-88-3	**0.00332**	0.00200	mg/kg	04.13.19 03.52		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.13.19 03.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.13.19 03.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.13.19 03.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.13.19 03.52	U	1
Total BTEX		**0.00332**	0.00200	mg/kg	04.13.19 03.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.13.19 03.52	
4-Bromofluorobenzene	460-00-4	123	%	70-130	04.13.19 03.52	

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Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-009	Date Collected:	04.04.19 13.40	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	04.14.19 15.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	04.12.19 03.36	U	5
Diesel Range Organics (DRO)	C10C28DRO	**4840**	74.9	mg/kg	04.12.19 03.36		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**927**	74.9	mg/kg	04.12.19 03.36		5
Total TPH	PHC635	**5770**	74.9	mg/kg	04.12.19 03.36		5
Total GRO-DRO	PHC628	**4840**	74.9	mg/kg	04.12.19 03.36		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.12.19 03.36	
o-Terphenyl	84-15-1	120	%	70-135	04.12.19 03.36	

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Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-009	Date Collected:	04.04.19 13.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.19	Basis:	Wet Weight
Seq Number:	3085721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.15.19 12.33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.15.19 12.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.15.19 12.33	
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.15.19 12.33	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-010	Date Collected:	04.04.19 13.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.70**	4.98	mg/kg	04.14.19 15.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 03.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.12.19 03.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 03.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.12.19 03.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.12.19 03.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.12.19 03.56	
o-Terphenyl	84-15-1	94	%	70-135	04.12.19 03.56	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-010	Date Collected:	04.04.19 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.19	Basis:	Wet Weight
Seq Number:	3085721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.15.19 05.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.15.19 05.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.15.19 05.43	
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.15.19 05.43	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-011	Date Collected:	04.04.19 14.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.10.19 16.45	Basis:	Wet Weight
Seq Number:	3085620				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.48**	5.04	mg/kg	04.14.19 15.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.12.19 04.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**28.3**	15.0	mg/kg	04.12.19 04.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.12.19 04.16	U	1
Total TPH	PHC635	**28.3**	15.0	mg/kg	04.12.19 04.16		1
Total GRO-DRO	PHC628	**28.3**	15.0	mg/kg	04.12.19 04.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.12.19 04.16	
o-Terphenyl	84-15-1	93	%	70-135	04.12.19 04.16	

Certificate of Analytical Results 620366

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	04.08.19 13.55
Lab Sample Id:	620366-011	Date Collected:	04.04.19 14.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.19	Basis:	Wet Weight
Seq Number:	3085721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.15.19 06.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.15.19 06.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.15.19 06.02	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.15.19 06.02	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 620366

LT Environmental, Inc.

PLU 274

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085620 — Matrix: Solid — Date Prep: 04.10.19
MB Sample Id: 7675495-1-BLK — LCS Sample Id: 7675495-1-BKS — LCSD Sample Id: 7675495-1-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	257	103	255	102	90-110	1	20	mg/kg	04.14.19 13:13	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085620 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620316-006 — MS Sample Id: 620316-006 S — MSD Sample Id: 620316-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	39.3	248	301	106	296	104	90-110	2	20	mg/kg	04.14.19 13:35	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085620 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620366-010 — MS Sample Id: 620366-010 S — MSD Sample Id: 620366-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.70	249	264	104	255	100	90-110	3	20	mg/kg	04.14.19 15:31	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3085437 — Matrix: Solid — Date Prep: 04.11.19
MB Sample Id: 7675578-1-BLK — LCS Sample Id: 7675578-1-BKS — LCSD Sample Id: 7675578-1-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	1060	106	1000	100	70-135	6	20	mg/kg	04.11.19 20:31	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1120	112	70-135	5	20	mg/kg	04.11.19 20:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		128		129		70-135	%	04.11.19 20:31
o-Terphenyl	111		128		123		70-135	%	04.11.19 20:31

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

QC Summary 620366

LT Environmental, Inc.

PLU 274

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3085437 | Matrix: Soil | Date Prep: 04.11.19
Parent Sample Id: 620611-001 | MS Sample Id: 620611-001 S | MSD Sample Id: 620611-001 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	998	907	91	919	92	70-135	1	20	mg/kg	04.11.19 21:28	
Diesel Range Organics (DRO)	<8.11	998	986	99	1010	101	70-135	2	20	mg/kg	04.11.19 21:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		124		70-135	%	04.11.19 21:28
o-Terphenyl	121		118		70-135	%	04.11.19 21:28

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3085551 | Matrix: Solid | Date Prep: 04.11.19
MB Sample Id: 7675680-1-BLK | LCS Sample Id: 7675680-1-BKS | LCSD Sample Id: 7675680-1-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	0.0924	93	0.0938	95	70-130	2	35	mg/kg	04.12.19 18:44	
Toluene	<0.00200	0.0998	0.0895	90	0.0915	92	70-130	2	35	mg/kg	04.12.19 18:44	
Ethylbenzene	<0.000564	0.0998	0.0957	96	0.0962	97	70-130	1	35	mg/kg	04.12.19 18:44	
m,p-Xylenes	<0.00101	0.200	0.211	106	0.203	103	70-130	4	35	mg/kg	04.12.19 18:44	
o-Xylene	<0.000344	0.0998	0.107	107	0.103	104	70-130	4	35	mg/kg	04.12.19 18:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		99		99		70-130	%	04.12.19 18:44
4-Bromofluorobenzene	111		105		105		70-130	%	04.12.19 18:44

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3085721 | Matrix: Solid | Date Prep: 04.14.19
MB Sample Id: 7675776-1-BLK | LCS Sample Id: 7675776-1-BKS | LCSD Sample Id: 7675776-1-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	0.0945	95	0.0923	92	70-130	2	35	mg/kg	04.15.19 03:51	
Toluene	<0.00200	0.0998	0.0908	91	0.0898	90	70-130	1	35	mg/kg	04.15.19 03:51	
Ethylbenzene	<0.00200	0.0998	0.0937	94	0.0933	93	70-130	0	35	mg/kg	04.15.19 03:51	
m,p-Xylenes	<0.00399	0.200	0.185	93	0.184	92	70-130	1	35	mg/kg	04.15.19 03:51	
o-Xylene	<0.00200	0.0998	0.0951	95	0.0946	95	70-130	1	35	mg/kg	04.15.19 03:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		98		70-130	%	04.15.19 03:51
4-Bromofluorobenzene	101		102		102		70-130	%	04.15.19 03:51

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 620366

LT Environmental, Inc.

PLU 274

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085551 Matrix: Soil Date Prep: 04.11.19
Parent Sample Id: 620188-045 MS Sample Id: 620188-045 S MSD Sample Id: 620188-045 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	0.0842	84	0.0891	88	70-130	6	35	mg/kg	04.12.19 19:22	
Toluene	<0.000457	0.100	0.0823	82	0.0878	87	70-130	6	35	mg/kg	04.12.19 19:22	
Ethylbenzene	0.000792	0.100	0.0857	85	0.0912	90	70-130	6	35	mg/kg	04.12.19 19:22	
m,p-Xylenes	0.00438	0.201	0.178	86	0.187	90	70-130	5	35	mg/kg	04.12.19 19:22	
o-Xylene	0.00201	0.100	0.0904	88	0.0949	92	70-130	5	35	mg/kg	04.12.19 19:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	04.12.19 19:22
4-Bromofluorobenzene	110		110		70-130	%	04.12.19 19:22

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085721 Matrix: Soil Date Prep: 04.14.19
Parent Sample Id: 620366-010 MS Sample Id: 620366-010 S MSD Sample Id: 620366-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0806	81	0.0292	29	70-130	94	35	mg/kg	04.15.19 04:29	XF
Toluene	<0.000457	0.100	0.0774	77	0.0422	42	70-130	59	35	mg/kg	04.15.19 04:29	XF
Ethylbenzene	<0.000567	0.100	0.0767	77	0.0487	48	70-130	45	35	mg/kg	04.15.19 04:29	XF
m,p-Xylenes	0.00120	0.201	0.153	76	0.0932	46	70-130	49	35	mg/kg	04.15.19 04:29	XF
o-Xylene	0.000651	0.100	0.0787	78	0.0497	49	70-130	45	35	mg/kg	04.15.19 04:29	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		91		70-130	%	04.15.19 04:29
4-Bromofluorobenzene	108		148	**	70-130	%	04.15.19 04:29

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

Chain of Custody

Work Order No: 203464

XENCO LABORATORIES

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

www.xenco.com Page 1 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	PLU 274	Turn Around	
Project Number:		Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	L. Lambach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5|0.4	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0
Sample Custody Seals:	Yes No N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS01	S	04/04/19	12:10	0.25'	1	X	X	X
SS04A	S		12:30	1'				
SS10	S		12:40	1'				
SS10A	S		12:50	2'				
SS11	S		13:00	1'				
SS11A	S		13:10	2'				
SS12	S		13:20	0.5'				
SS12A	S		13:30	1'				
SS03A	S		13:40	1'				
SS-2A	S		13:50	1'				

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			04/08/2019 8:30	2			4/8/19 1355
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 1020364

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

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell XTO Energy
Company Name:	LT Environmental, Inc., Permian office	Company Name:	
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	PLU 274	Turn Around	
Project Number:	01291806	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	L. Lambert	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.5/0.4	Thermometer ID		
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS05A	S	04/04/19	14:00	1'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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		04/08/19 8:30	2		4/8/19
3			4		1005
5			6		

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/08/2019 01:55:00 PM

Work Order #: 620366

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)?	.4
#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: 04/08/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/08/2019

Kalei Stout

Analytical Report 622952

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 274

03-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

03-MAY-19

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

Reference: XENCO Report No(s): **622952**
PLU 274
Project Address: Delaware Basin

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 622952. 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. 622952 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02	S	04-30-19 11:15	4 ft	622952-001
SW01	S	04-30-19 11:20	0 - 4 ft	622952-002
SW02	S	04-30-19 11:25	0 - 4 ft	622952-003
SS12B	S	04-30-19 09:40	2.5 ft	622952-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 274

Project ID:
Work Order Number(s): *622952*

Report Date: *03-MAY-19*
Date Received: *05/02/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087777 BTEX by EPA 8021B

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

Certificate of Analysis Summary 622952

LT Environmental, Inc., Arvada, CO

Project Name: PLU 274

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-02-19 11:05 am
Report Date: 03-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622952-001		622952-002		622952-003		622952-004					
	Field Id:	FS02		SW01		SW02		SS12B					
	Depth:	4- ft		0-4 ft		0-4 ft		2.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Apr-30-19 11:15		Apr-30-19 11:20		Apr-30-19 11:25		Apr-30-19 09:40					
BTEX by EPA 8021B	***Extracted:***	May-02-19 12:30		May-02-19 12:30		May-02-19 12:30		May-02-19 12:30					
	Analyzed:	May-02-19 15:00		May-02-19 15:20		May-02-19 15:40		May-02-19 16:00					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	May-02-19 14:45		May-02-19 14:45		May-02-19 14:45		May-02-19 14:45					
	Analyzed:	May-02-19 15:10		May-02-19 15:28		May-02-19 15:34		May-02-19 15:40					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		233	50.4	7.00	5.04	84.6	5.01	5.61	5.00				
TPH by SW8015 Mod	***Extracted:***	May-02-19 12:00		May-02-19 12:00		May-02-19 12:00		May-02-19 12:00					
	Analyzed:	May-02-19 14:08		May-03-19 07:41		May-02-19 15:28		May-02-19 15:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		18.2	15.0	<15.0	15.0	624	15.0	17.8	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	151	15.0	<15.0	15.0				
Total TPH		18.2	15.0	<15.0	15.0	775	15.0	17.8	15.0				
Total GRO-DRO		18.2	15.0	<15.0	15.0	624	15.0	17.8	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-001	Date Collected:	04.30.19 11.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	0
Analyst:	SPC	Date Prep:	05.02.19 14.45	Basis:	Dry Weight
Seq Number:	3087814				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**233**	50.4	mg/kg	05.02.19 15.10		10

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 14.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.2**	15.0	mg/kg	05.02.19 14.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 14.08	U	1
Total TPH	PHC635	**18.2**	15.0	mg/kg	05.02.19 14.08		1
Total GRO-DRO	PHC628	**18.2**	15.0	mg/kg	05.02.19 14.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.02.19 14.08	
o-Terphenyl	84-15-1	100	%	70-135	05.02.19 14.08	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-001	Date Collected:	04.30.19 11.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 12.30	Basis:	Wet Weight
Seq Number:	3087777				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.02.19 15.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.02.19 15.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.02.19 15.00	
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.02.19 15.00	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-002	Date Collected:	04.30.19 11.20	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	0
Analyst:	SPC	Date Prep:	05.02.19 14.45	Basis:	Dry Weight
Seq Number:	3087814				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.00**	5.04	mg/kg	05.02.19 15.28		1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.03.19 07.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.03.19 07.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.03.19 07.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.03.19 07.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.03.19 07.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.03.19 07.41	
o-Terphenyl	84-15-1	101	%	70-135	05.03.19 07.41	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-002	Date Collected:	04.30.19 11.20	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 12.30	Basis:	Wet Weight
Seq Number:	3087777				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.02.19 15.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.02.19 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	05.02.19 15.20	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.02.19 15.20	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-003	Date Collected:	04.30.19 11.25	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	0
Analyst:	SPC	Date Prep:	05.02.19 14.45	Basis:	Dry Weight
Seq Number:	3087814				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.6**	5.01	mg/kg	05.02.19 15.34		1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 15.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**624**	15.0	mg/kg	05.02.19 15.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**151**	15.0	mg/kg	05.02.19 15.28		1
Total TPH	PHC635	**775**	15.0	mg/kg	05.02.19 15.28		1
Total GRO-DRO	PHC628	**624**	15.0	mg/kg	05.02.19 15.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.02.19 15.28	
o-Terphenyl	84-15-1	103	%	70-135	05.02.19 15.28	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-003	Date Collected:	04.30.19 11.25	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 12.30	Basis:	Wet Weight
Seq Number:	3087777				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.02.19 15.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.02.19 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.02.19 15.40	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.02.19 15.40	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS12B**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-004	Date Collected:	04.30.19 09.40	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	0
Analyst:	SPC	Date Prep:	05.02.19 14.45	Basis:	Dry Weight
Seq Number:	3087814				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.61**	5.00	mg/kg	05.02.19 15.40		1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.02.19 15.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.8**	15.0	mg/kg	05.02.19 15.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.02.19 15.48	U	1
Total TPH	PHC635	**17.8**	15.0	mg/kg	05.02.19 15.48		1
Total GRO-DRO	PHC628	**17.8**	15.0	mg/kg	05.02.19 15.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.02.19 15.48	
o-Terphenyl	84-15-1	101	%	70-135	05.02.19 15.48	

Certificate of Analytical Results 622952

LT Environmental, Inc., Arvada, CO

PLU 274

Sample Id:	**SS12B**	Matrix:	Soil	Date Received:	05.02.19 11.05
Lab Sample Id:	622952-004	Date Collected:	04.30.19 09.40	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.02.19 12.30	Basis:	Wet Weight
Seq Number:	3087777				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.02.19 16.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.02.19 16.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	05.02.19 16.00	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.02.19 16.00	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 622952

LT Environmental, Inc.

PLU 274

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087814 — Matrix: Solid — Date Prep: 05.02.19
MB Sample Id: 7677036-1-BLK — LCS Sample Id: 7677036-1-BKS — LCSD Sample Id: 7677036-1-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	241	96	242	97	90-110	0	20	mg/kg	05.02.19 11:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087814 — Matrix: Soil — Date Prep: 05.02.19
Parent Sample Id: 622952-001 — MS Sample Id: 622952-001 S — MSD Sample Id: 622952-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	233	252	504	108	508	109	90-110	1	20	mg/kg	05.02.19 15:16	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3087814 — Matrix: Soil — Date Prep: 05.02.19
Parent Sample Id: 622954-004 — MS Sample Id: 622954-004 S — MSD Sample Id: 622954-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1830	250	1980	60	1990	64	90-110	1	20	mg/kg	05.02.19 16:33	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3087797 — Matrix: Solid — Date Prep: 05.02.19
MB Sample Id: 7677065-1-BLK — LCS Sample Id: 7677065-1-BKS — LCSD Sample Id: 7677065-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	977	98	997	100	70-135	2	20	mg/kg	05.02.19 13:27	
Diesel Range Organics (DRO)	<8.13	1000	989	99	1020	102	70-135	3	20	mg/kg	05.02.19 13:27	

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

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

QC Summary 622952

LT Environmental, Inc.

PLU 274

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3087797 | Matrix: Soil | Date Prep: 05.02.19
Parent Sample Id: 622952-001 | MS Sample Id: 622952-001 S | MSD Sample Id: 622952-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	984	98	1010	101	70-135	3	20	mg/kg	05.02.19 14:28	
Diesel Range Organics (DRO)	18.2	999	1010	99	1040	102	70-135	3	20	mg/kg	05.02.19 14:28	

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

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3087777 | Matrix: Solid | Date Prep: 05.02.19
MB Sample Id: 7677037-1-BLK | LCS Sample Id: 7677037-1-BKS | LCSD Sample Id: 7677037-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.109	109	0.112	112	70-130	3	35	mg/kg	05.02.19 13:01	
Toluene	<0.000454	0.0996	0.102	102	0.106	106	70-130	4	35	mg/kg	05.02.19 13:01	
Ethylbenzene	<0.000563	0.0996	0.109	109	0.114	114	70-130	4	35	mg/kg	05.02.19 13:01	
m,p-Xylenes	<0.00101	0.199	0.232	117	0.241	121	70-130	4	35	mg/kg	05.02.19 13:01	
o-Xylene	<0.000343	0.0996	0.114	114	0.119	119	70-130	4	35	mg/kg	05.02.19 13:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		102		102		70-130	%	05.02.19 13:01
4-Bromofluorobenzene	85		98		101		70-130	%	05.02.19 13:01

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3087777 | Matrix: Soil | Date Prep: 05.02.19
Parent Sample Id: 622952-001 | MS Sample Id: 622952-001 S | MSD Sample Id: 622952-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0907	91	0.0897	89	70-130	1	35	mg/kg	05.02.19 13:40	
Toluene	0.000479	0.100	0.0834	83	0.0815	80	70-130	2	35	mg/kg	05.02.19 13:40	
Ethylbenzene	<0.000567	0.100	0.0865	87	0.0822	81	70-130	5	35	mg/kg	05.02.19 13:40	
m,p-Xylenes	<0.00102	0.201	0.182	91	0.172	85	70-130	6	35	mg/kg	05.02.19 13:40	
o-Xylene	<0.000346	0.100	0.0894	89	0.0846	84	70-130	6	35	mg/kg	05.02.19 13:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	05.02.19 13:40
4-Bromofluorobenzene	100		104		70-130	%	05.02.19 13:40

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

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

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

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

Chain of Custody

Work Order No: 02952

XENCO LABORATORIES
Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 274	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-2978	Rush: 24hr	
Sampler's Name:	Robert McAfee	Due Date: 05/02/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4/0.3	Thermometer ID:	D8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS02	S	04/30/19	1115	4'	1	X	X	X
SW01			1120	0-4'		X	X	X
SW02			1125	0-4'		X	X	X
SS12B			0940	2.5'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite
discrete

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			04.30.19 16:23			5/2/19 1105
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Work Order #: 622952

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: 05/02/2019

Brianna Teel

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

Jessica Kramer

ATTACHMENT 3: SOIL SAMPLE LOGS

LT Environmental, Inc.

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

LITHOLOGIC / SOIL SAMPLING LOG

Identifier: SS02	Date: 04/04/2019
Project Name: PLU 274	RP Number: 2RP 2978
Logged By: L. Launbach	Method: hand Auger
Hole Diameter: 2.5"	Total Depth: 1'

Lat/Long:

Field Screening: PID chlorides

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	492	21.4	N	SS02A	1'			caliche, no odor, dry, ~90% fines, chipped rocky
					2			
					3			
					4			deepest depth
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: SS03	Date: 04/04/2019
Project Name: PLU 274	RP Number: 2RP-2978
Logged By: L. Laumbach	Method: hand Auger
Hole Diameter: 2.5"	Total Depth: 1'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID chlorides

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	<192	270.2	N	SS03A	1'		caliche	odor, TPH?, rocky - hard to auger through deepest depth
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
SS04	04/04/2019
Project Name:	**RP Number:**
PLU 274	2RP-2978
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: L. Lawrence Method: hand Auger
Lat/Long:	Field Screening: PID, chloride Hole Diameter: 2.5" Total Depth: 1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	CHR	9.2	N	SS04A	0			caliche, rocky, N odor
					1'			refusal
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier: SS05	Date: 04/04/25
Project Name: PLU 274	RP Number: 2RP 2978
Logged By: L. Lawrence	Method: hand Auger
Hole Diameter: 2.5"	Total Depth: 1'
Lat/Long:	Field Screening: PID, chlorides

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<192	12.9	N	SS05@1	0–1			caliche 2" diameter rocks N odor/N stain
					2–12			deepest depth

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
SS10	04/04/2019
Project Name:	**RP Number:**
PLU 274	2RP-2978

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: PID chandles	Logged By: L. Lambuth	Method: hand Auger
		Hole Diameter: 2.5"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<192	27.3	N		0		caliche	caliche, rocky, hard to auger through
D	<192	10.6	N		1			No odor
					2			refusal
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: SS11	Date: 04/04/2019
Project Name: PLU 274	RP Number: 2RP 2978
Logged By: L. Lambuth	Method: hand Auger
Hole Diameter: 2.5"	Total Depth: 2'
Field Screening: PID, chlorides	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<192	18.4		SS11	0 – 1'			caliche, rocky, rocks getting stuck in auger / Nodes
D	<192	110.2		SS11A	1' – 2'			2-3" oblong rocks refusal
					2' – 12'			

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

Identifier: SS12	Date: 04/04/2019
Project Name: PLU 274	RP Number: 2RP 2928
Logged By: L. Lambert	Method: hand Auger
Lat/Long:	Field Screening: PID, chlorides
Hole Diameter: 2.5"	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<192	98.2		SS12	0.5'			caliche - right off pad, tan, N odor
D	<192	192.4		SS12A	1		SM	topsoil, odor, brown, sandy loam light, fines
					2			deepest depth
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: PHOTOGRAPHIC LOG

View facing west of the excavation in the pasture area south of the well pad.

Project: 012918060	XTO Energy, Inc. Poker Lake Unit 274 Tank Battery	LTE Advancing Opportunity
April 30, 2019	Photographic Log	

View facing north of the excavation within the process equipment containment.

Project: 012918060	XTO Energy, Inc. Poker Lake Unit 274 Tank Battery	LTE Advancing Opportunity
February 8, 2019	Photographic Log	

View facing south of the excavation within the process equipment containment.

Project: 012918060	XTO Energy, Inc. Poker Lake Unit 274 Tank Battery	LTE Advancing Opportunity
April 30, 2019	Photographic Log	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 496058

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1512157315**
Incident Name	**NAB1512157315 POKER LAKE UNIT #274 @ 30-015-35138**
Incident Type	**Produced Water Release**
Incident Status	**Reclamation Report Received**
Incident Well	**[30-015-35138] POKER LAKE UNIT #274**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	POKER LAKE UNIT #274
Date Release Discovered	04/20/2015
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Treating Tower | Crude Oil | Released: 13 BBL | Recovered: 3 BBL | Lost: 10 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Treating Tower | Produced Water | Released: 9 BBL | Recovered: 2 BBL | Lost: 7 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 08/14/2025

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan		
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission		Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Have the lateral and vertical extents of contamination been fully delineated		Yes
Was this release entirely contained within a lined containment area		No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 Cl B)	233
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	99.8
GRO+DRO	(EPA SW-846 Method 8015M)	99.8
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence		08/14/2018
On what date will (or did) the final sampling or liner inspection occur		05/13/2025
On what date will (or was) the remediation complete(d)		05/13/2025
What is the estimated surface area (in square feet) that will be reclaimed		1650
What is the estimated volume (in cubic yards) that will be reclaimed		195
What is the estimated surface area (in square feet) that will be remediated		1650
What is the estimated volume (in cubic yards) that will be remediated		195
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.		

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 08/14/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**400632**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**11/14/2024**
What was the (estimated) number of samples that were to be gathered	**6**
What was the sampling surface area in square feet	**800**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1650
What was the total volume (cubic yards) remediated	195
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	1650
What was the total volume (in cubic yards) reclaimed	195
Summarize any additional remediation activities not included by answers (above)	Excavation activities were conducted at the Site to address the impacted soil resulting from the April 20, 2015, crude oil and produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria and reclamation requirements. Based on the soil sample analytical results, no further remediation is required.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 08/14/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	1650
What was the total volume of replacement material (in cubic yards) for this site	195
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	04/15/2026
Summarize any additional reclamation activities not included by answers (above)	Following backfill activities, the disturbed area was contoured to match the surrounding topography and the surface was prepared for seeding. Upon confirmation that the excavation was backfilled with non-waste containing material, the disturbed pasture area will be seeded with a certified weed-free seed mix. The BLM sandy site #2 seed mixture will be used to seed the Site. The seed mix will be applied via drill seeding or doubled if broadcast. The Site will be monitored for vegetation growth to ensure that reclamation activities were successful.
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.	
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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

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CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 496058
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
scwells	Reclamation approved with the following conditions: 1) Confirmation samples were collected on 11/18/2024 however a C-141N was not submitted for this date. Operator failed to provide proper Sampling Notification pursuant to 19.15.29.12.D.(1).(a) NMAC. Failure to provide proper sampling notice is a compliance issue and the OCD may pursue compliance actions pursuant to 19.15.5 NMAC. Operator shall ensure future compliance with 19.15.29.12.D.(1).(a) NMAC.	9/4/2025