ENSOLUM

February 10, 2025

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

Re: Closure Request
Poker Lake Unit #301H
Incident Number nAB1507941546
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* to document soil sampling activities performed at the Poker Lake Unit 301H (Site), in accordance with an approved *Remediation Work Plan (Work Plan)*, submitted June 29, 2023 and in response to the denied *Closure Request Addendum (Addendum)*, dated September 22, 2023. The *Addendum* detailed delineation and excavation activities that were completed at the Site and the *Work Plan* proposed installation of a depth to water boring to confirm the applicable Site Closure Criteria. Based on laboratory analytical results from the additional soil sampling events in response to the denied *Addendum* and confirmation of depth to groundwater at the Site in accordance with the approved *Work Plan*, XTO is submitting this *Closure Request*, describing remediation that has occurred and requesting no further action for Incident Number nAB1507941546.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 27, Township 24 South, Range 30 East, in Eddy County, New Mexico (32. 1893272°, -103. 8701096°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On March 16, 2015, the stuffing box packing failed, and the E-pot, designed to shut down the well and control the fluids, failed to properly operate. As a result, approximately 13 barrels (bbls) of crude oil and 13 bbls of produced water were released. The release impacted approximately 9,537 square feet of caliche well pad and misted approximately 15,000 square feet of well pad and 9,000 square feet of pasture north of the pad. A vacuum truck recovered approximately 3 bbls of crude oil and 2 bbls of produced water and the saturated surface soil was scraped and removed for disposal. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on March 19, 2015. The release was assigned Remediation Permit (RP) Number 2RP-2900 and Incident Number nAB1507941546.

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.

BACKGROUND

On October 16, 2019, a *Closure Request* detailing site characterization according to Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC was submitted to the NMOCD. Results from the characterization are summarized below and a copy of the *Closure Request* is included in the September 22, 2023 *Addendum*. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I 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: 20,000 mg/kg

Between April 2018 and June 2019, delineation and excavation activities were conducted at the Site to address the impacted soil. Closure was requested on October 16, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria.

On March 23, 2023, NMOCD denied the Closure Request for Incident Number nAB1507941546 for following reason:

> *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater*.

In response to the denial, XTO submitted a *Work Plan*, attached in Appendix A, to the NMOCD on June 29, 2023. The Work Plan proposed to install a soil boring within 0.5 miles of the Site to investigate depth to groundwater and confirm the Closure Criteria at the Site. The Work Plan was approved by the NMOCD on June 30, 2023.

As outlined in the June 29, 2023, *Work Plan,* XTO proceeded with the installation of a soil boring for determination of groundwater depth and confirmation of the Site Closure Criteria. During August 2023, a borehole, permitted as New Mexico Office of the State Engineer (NMOSE) well C-04761 (BH01), was advanced to a depth of 115 feet below ground surface (bgs) via air rotary drill rig. The borehole was located approximately 0.48 miles northeast of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or saturated soil indicative of a groundwater table was observed during drilling of the soil boring. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix B.

On September 22, 2023, XTO submitted an *Addendum* to the NMOCD documenting the confirmation of regional depth to groundwater. The *Addendum* is included in Appendix C and includes the original *Closure Request*.

On October 17, 2023, NMOCD denied the *Addendum* for the following reason:

> *All areas not reasonably needed for production or subsequent drilling operations must be 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. Samples SW01 and SW03 measure from 0-5 feet bgs. SW01 and SW03 need to demonstrate that 0-4 feet bgs meet the 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*

Though the remediation activities occurred on pad, and XTO is not required to apply the reclamation requirement in this area, XTO proceeded with the requested additional excavation and soil sampling.

ADDITIONAL REMEDIATION SOIL SAMPLING ACTIVITIES

On February 16, 2024, Ensolum personnel returned to the Site to resample previously excavated sidewall soil samples SW01 and SW03 to confirm that all waste-containing soil had been removed at a minimum of 4 feet bgs. Composite soil samples SW01 and SW03 were collected from the sidewalls of the previously backfilled excavation at depths ranging from the ground surface to 5 feet bgs.

The sidewall soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. All confirmation 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 Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Photographic documentation of the soil sampling activities is included in Appendix D. The excavation extent and confirmation soil sample locations are presented on Figure 2.

Laboratory analytical results for sidewall soil samples SW01 and SW03 indicated all COC concentrations were in compliance with the Closure Criteria and reclamation requirement. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix E.

CLOSURE REQUEST

Excavation activities were conducted at the Site to address impacts to soil resulting from the March 2015 release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. A soil boring installed within 0.5 miles of the Site confirmed depth to groundwater greater than 100 feet bgs. Based on excavation of impacted soil to below the confirmed Site Closure Criteria, XTO respectfully requests closure for Incident Number nAB1507941546.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist

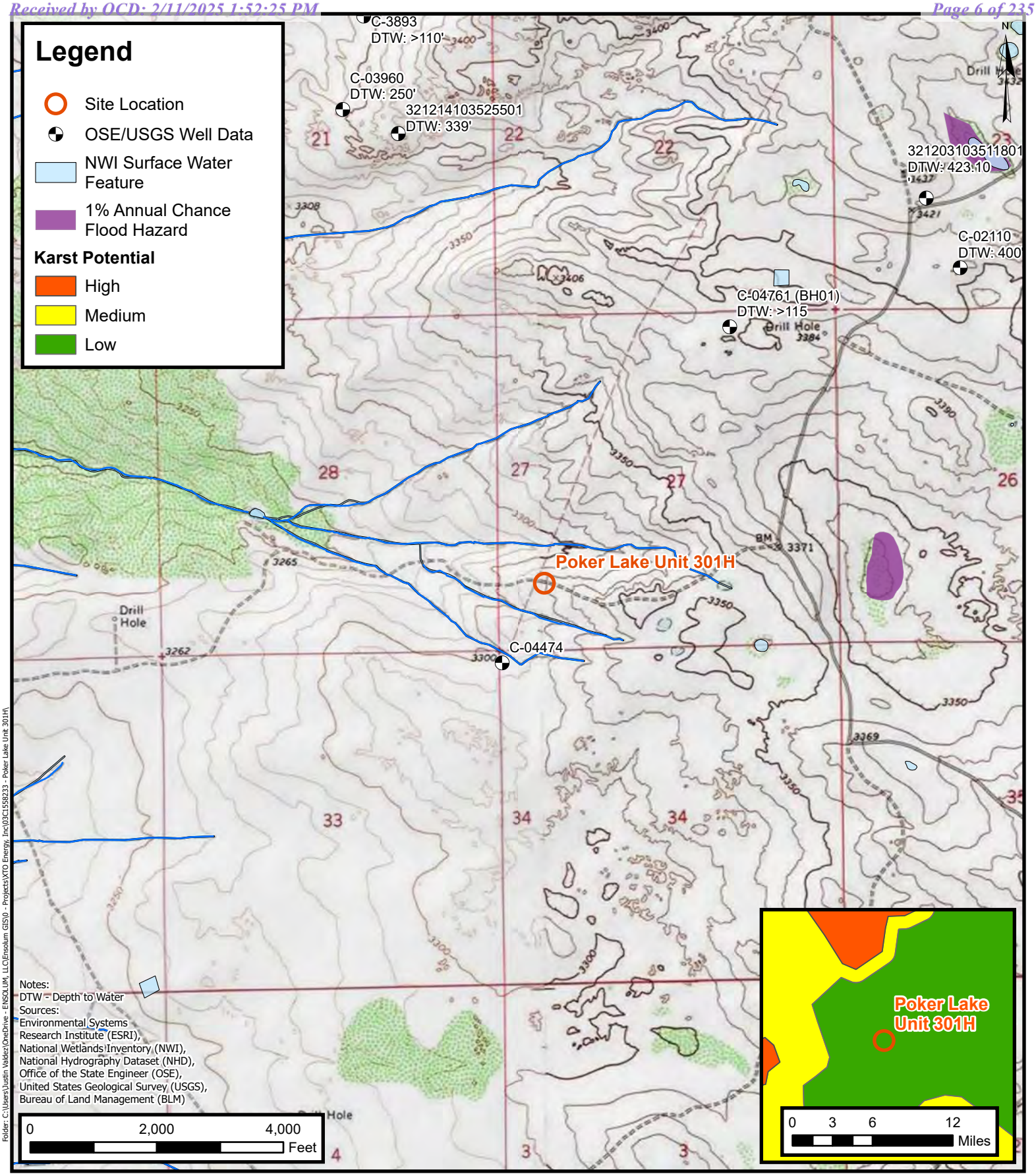
cc: Kaylan Dirkx, XTO
Colton Brown, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	June 29, 2023 *Remediation Work Plan*
Appendix B	Referenced Well Records
Appendix C	September 22, 2023 *Closure Request Addendum*
Appendix D	Photographic Log
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation

ENSOLUM

FIGURES



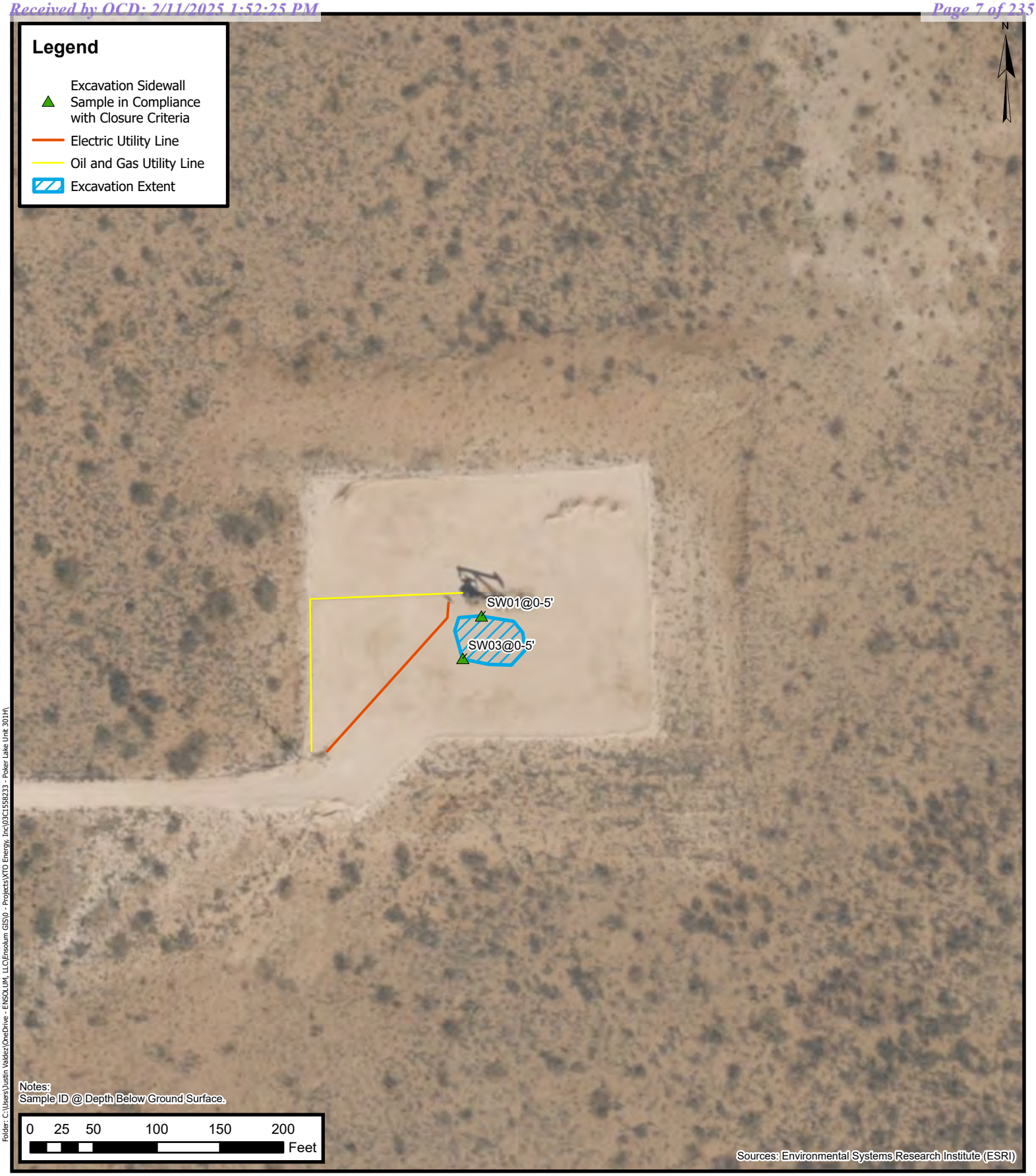
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558233 - Poker Lake Unit 301H\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
Poker Lake Unit 301H
Incident Number: NAB1507941546
Unit F, Section 27, T24S, R30E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558233 - Poker Lake Unit 301H\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
Poker Lake Unit 301H
Incident Number: NAB1507941546
Unit F, Section 27, T 24S, R 30E
Eddy County, New Mexico

FIGURE 2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Poker Lake Unit 301H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample 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 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Confirmation Soil Samples										
SW01	02/16/2024	0 - 5	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	148
SW03	02/16/2024	0 - 5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	171

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

ENSOLUM

APPENDIX A

June 29, 2023
Remediation Work Plan

June 28, 2023

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

Re: Remediation Work Plan
Poker Lake Unit 301H
Incident Number nAB1507941546
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan* (*Work Plan*) as a follow up to the *Closure Request* dated October 16, 2019. This *Work Plan* proposes to complete additional depth to groundwater determination activities at the Poker Lake Unit 301H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the October 16, 2019, *Closure Request*. In the denial, NMOCD expressed concern that depth to groundwater was not adequately determined. The following *Work Plan* proposes to install a soil boring within 0.5 miles of the Site to investigate depth to groundwater and confirm the Closure Criteria at the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 27, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.189307°, -103.870133°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On March 16, 2015, the stuffing box packing failed, and the E-pot designed to shut down the well and control the fluids failed to properly operate. As a result, approximately 13 barrels (bbls) of crude oil and 13 bbls of produced water were released. The release impacted approximately 9,537 square feet of caliche well pad and misted approximately 15,000 square feet of well pad and 9,000 square feet of pasture north of the pad. A vacuum truck recovered approximately 3 bbls of crude oil and 2 bbls of produced water and the saturated surface soil was scraped and removed for disposal. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on March 19, 2015. The release was assigned Remediation Permit (RP) Number 2RP-2900 and Incident Number nAB1507941546.

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.

BACKGROUND

The October 16, 2019, Closure Request detailed site characterization according to Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. 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: 20,000 mg/kg

Between April 2018 and June 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the March 16, 2015, crude oil and produced water release. Closure was requested on October 16, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the October 16, 2019, *Closure Request*.

On March 23, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1507941546 for following reason:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

PROPOSED REMEDIATION WORKPLAN

In order to confirm depth to groundwater is greater than 100 feet bgs at the Site, XTO proposes to advance a soil boring to a depth of 105 feet bgs within 0.5 miles of the Site. A field geologist will log and describe soils continuously. The soil boring will be left open for over 72 hours to allow for equilibration of groundwater levels within the temporary boring casing. After the 72-hour waiting period, depth to groundwater will be assessed and the soil boring will be backfilled following New Mexico Office of the State Engineer (NMOSE) approved procedures. A well record or soil boring log will be included in the follow up Closure Report.

XTO will complete the soil boring within 90 days of the date of approval of this *Work Plan* by the NMOCD and submit a *Closure Request Addendum* within 30 days of completing the soil boring. XTO believes this *Work Plan* is protective of human health, the environment, and groundwater and respectfully requests approval of this *Work Plan* for Incident Number nAB1507941546.

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

Ashley Ager, P.G.
Program Director

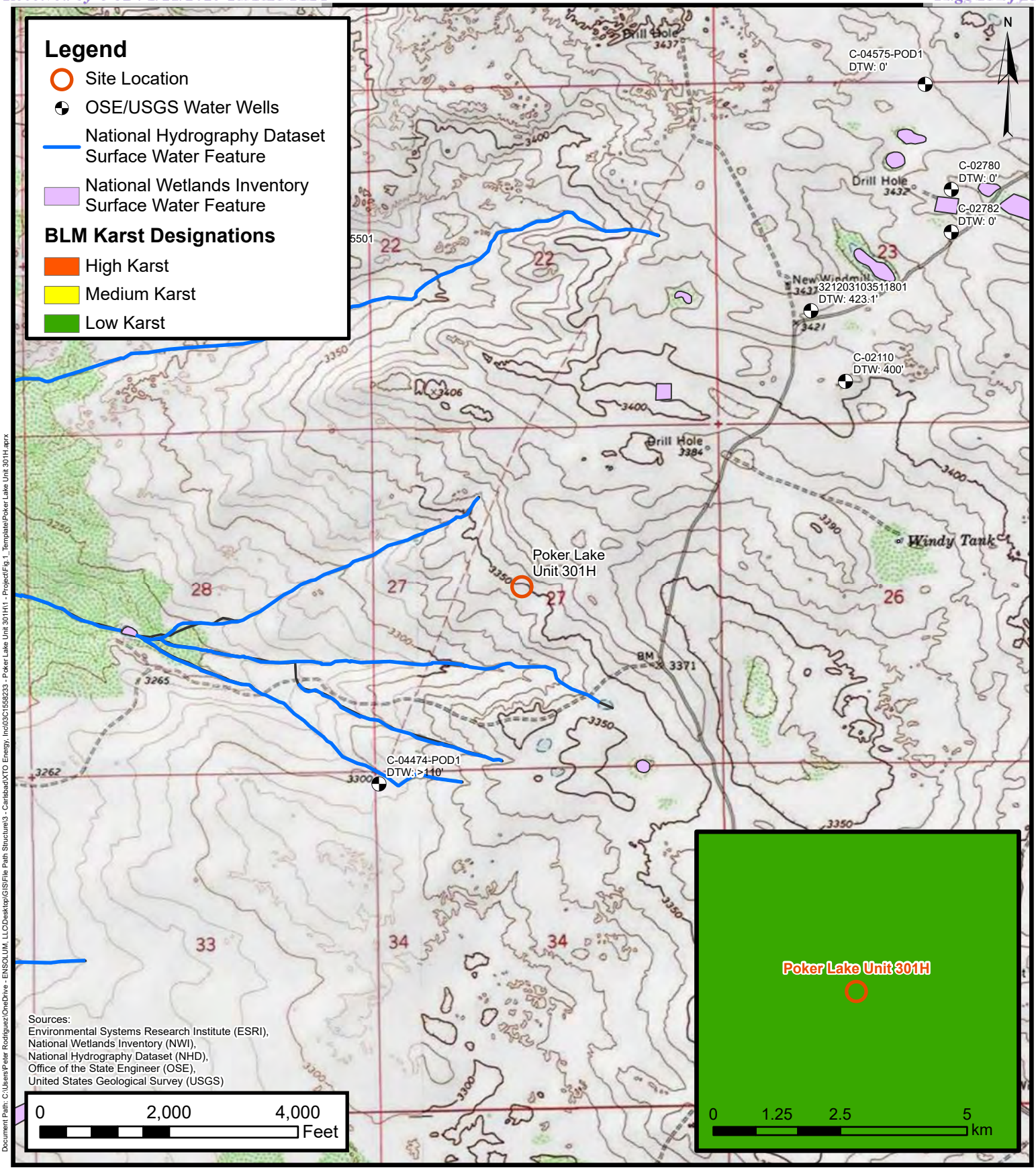
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map

ENSOLUM

FIGURES



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1558233 - Poker Lake Unit 301H\1 - Project\Fig_1_Template\Poker Lake Unit 301H.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Poker Lake Unit 301H
Incident Number: NAB1507941546
Unit F, Section 27, T24S, R30E
Eddy County,New Mexico

FIGURE
1

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 19 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

nAB1507941546 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-301H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-36924

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	27	24S	30E	2460	North	2310	West	Eddy

Latitude N 32.189307 **Longitude** W 103.870133

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 13 Bbls crude oil and 13 Bbls PW	Volume Recovered: 3 Bbls crude oil and 2 Bbls PW
Source of Release: Stuffing box	Date and Hour of Occurrence: 3/16/15 time unknown	Date and Hour of Discovery: 3/16/15 at approximately 4:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD and BLM	
By Whom? Brad Blevins	Date and Hour: 3/16/15 at approx. 5:00 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The stuffing box packing failed, the E-pot designed to shut down the well and control fluids failed to operate properly. The well was shut in. Repair crews re-aligned the well and replaced the stuffing box on 3/17/15.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 9,537 of caliche well pad with standing puddles and flow paths. It also misted approximately 15,000 sq.ft. of pad and approximately 9,000 sq.ft. of pasture area with a light mist. Crews washed down the rig and all of the free standing fluid was recovered. EPI remediation crew responded on 3/17/15. The saturated soil was scraped up, 20 cubic yards of soil was hauled to Lea Lands

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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 3/19/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By

Approval Date: 3/20/15 Expiration Date: N/A

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/20/15

Attached ☐

2RP-2900

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAB1507941546
District RP	2RP-2900
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-2900
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.189307 Longitude W 103.870133
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU 301H	Site Type: Production Well Facility
Date Release Discovered: 3/16/2015	API# *(if applicable):* 30-015-36924

Unit Letter	Section	Township	Range	County
F	27	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 13	Volume Recovered (bbls): 3
☒ Produced Water	Volume Released (bbls): 13	Volume Recovered (bbls): 2
	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
The stuffing box packing failed, the E-pot designed to shut down the well and control fluids failed to operate properly.
The release impacted approximately 9,537 of caliche well pad and misted approximately 15,000 sq.ft. of pad and approximately 9,000 sq.ft. of pasture area with a light mist. The saturated soil was scraped up, 20 cubic yards of soil was hauled to Lea Lands.

State of New Mexico
Oil Conservation Division

Incident ID	nAB1507941546
District RP	2RP-2900
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? Release greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Brad Blevins to NMOCD and BLM on 3-16-2015.	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/15 /2019

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

OCD Only

Received by: Date:

Incident ID	nAB1507941546
District RP	2RP-2900
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	nAB1507941546
District RP	2RP-2900
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: Garrett Green Title: SSHE Coordinator

Signature: Date: 6/28/2023

email: garrett.green@exxonmobil.com Telephone: (575)-200-0729

OCD Only

Received by: Shelly Wells Date: 6/29/2023

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nAB1507941546
District RP	2RP-2900
Facility ID	
Application ID	

Remediation Plan

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

- [X] Detailed description of proposed remediation technique
- [X] Scaled sitemap with GPS coordinates showing delineation points
- [X] Estimated volume of material to be remediated
- [X] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [X] 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: Garrett Green Title: SSHE Coordinator

Signature: Garrett Green Date: 6-28-2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Shelly Wells Date: 6/29/2023

- [x] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: Ashley Maxwell Date: 6/30/2023

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 234382
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	6/30/2023

ENSOLUM

APPENDIX B

Referenced Well Records

ENSOLUM

Sample Name: BH01 / C-04761	Date: 8/3/2023	
Site Name: PLU-301H		
Incident Number: nAB1507941546		
Job Number: 03C1558233		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Air Rotary
Coordinates: 32.195553, -103.864656	Hole Diameter: 5"	Total Depth: 115' bgs
Comments: No field screenings conducted.		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0'-20' CALICHE, white/tan, medium to coarse grains with small pebbles, sub-angular to sub-rounded grains, poorly sorted, slightly moist.
						10		
						20	SP	20'-30' SAND, medium brown/ orange, medium grained, sub-rounded, poorly sorted, moist.
						30		30'-40' SAND with trace caliche, medium brown/ orange, medium grained, sub-rounded grains, poorly sorted, moist.
						40		40'-90' SAND, orange, medium grained, poorly sorted with high quartz content, moist. Injected water and foaming agent @ 40' bgs.
						50		
						60		@ 52' bgs, hole collapsed due to sandy conditions. No evidence of water throughout drilling process.
						70		
						80		
						90	SP-SM	90'-115' SAND with some silt, orange/brown, primarily fine grained, poorly sorted.
						100		
						110		
						TD		Total Depth @ 115' bgs.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749177
File Nbr: C 04761

Jul. 24, 2023

BENJAMIN BELILL
ENSOLUM LLC
3122 NATIONALS PARKS HIGHWAY
CARLSBAD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Rodolfo Chavez
(575)622-6521

Enclosure

explore

File No. C-04761 POD1

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐	Pollution Control And/Or Recovery	☐	Ground Source Heat Pump	
☐ Exploratory Well (Pump test)	☐	Construction Site/Public Works Dewatering	☐	Other(Describe):	
☒ Monitoring Well	☐	Mine Dewatering			

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 7/21/2023 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: XTO Energy, Inc	Name: Ensolum, LLC
Contact or Agent: Garrett Green — check here if Agent ☐	Contact or Agent: Benjamin Belill — check here if Agent ☒
Mailing Address: 3401 E. Greene Street	Mailing Address: 3122 National Parks Highway
City: Carlsbad	City: Carlsbad
State: New Mexico Zip Code: 88220	State: New Mexico Zip Code: 88220
Phone: 575-200-0729 ☐ Home ☒ Cell Phone (Work):	Phone: 989-854-0852 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): Garrett.Green@ExxonMobil.com	E-mail (optional): bbelill@ensolum.com

OSE DII JUL 7 2023 AM 10:56

FOR OSE INTERNAL USE — Application for Permit, Form WR-07 Rev 11/17/16

File No.: C-04761	Trn. No.: 749177	Receipt No.: 2-45957
Trans Description (optional):		
Sub-Basin: CUB	PCW/LOG Due Date: 7/24/24	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
BH01 C-04761 POD1	-103.865615	32.195408	Unit B, Sec 27, T24S, R30E, Eddy County

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
Located on active well pad facility at the the Poker Lake Unit 450Y (32.195408, -103.865615).

Well is on land owned by: Federal - Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 110	Outside diameter of well casing (inches): 2
Driller Name: Scarborough Drilling	Driller License Number: WD-1188

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

One soil boring to be advanced at the site to assess subsurface soil and regional groundwater depth. Temporary 2-inch inside diameter PVC well screen will be placed in open borehole to determine depth to water at the site. The borehole will be abandoned after 72 hours from the time the borehole is completed. The borehole location is depicted on the attached figure.

OSE OIL JUL 7 2023 AM 10:56

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-04761 POD1	Trn No.: 749177

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Benjamin Belill
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief

Benjamin Belill Digitally signed by Benjamin Belill
Date: 2023.07.06 10:29:42 -04'00'
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 24th day of July 20 23, for the State Engineer,

Mike A. Hamman, P.E., State Engineer

OSE OIL JUL 7 20[illegible]

By: K. Parekh
Signature

Kashyap Parekh
Print

Title: Water Resource Manager I
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: C-04761 POD1 Trn No.: 749177

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04761 POD1 must be completed and the Well Log filed on or before 07/23/2024.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 07/24/2023	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 24 day of Jul A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K-Parekh
KASHYAP PAREKH

GREAT SEAL OF THE STATE OF NEW MEXICO * 1912 *

Trn Desc: C 04761 POD1

File Number: C 04761
Trn Number: 749177

ENSOLUM

Appendix C

September 22, 2023
Closure Request Addendum

ENSOLUM

September 22, 2023

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

Re: Closure Request Addendum
Poker Lake Unit 301H
Incident Number nAB1507941546
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following addendum to the original *Closure Request* dated October 16, 2019. This addendum provides an update to the depth to groundwater determination activities at the Poker Lake Unit 301H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the October 16, 2019, *Closure Request*. In the denial, NMOCD indicated that the depth to groundwater assessment was not sufficient. Based on the additional depth to groundwater determination activities described below, XTO is submitting this *Closure Request Addendum* and requesting closure for Incident Number nAB1507941546.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit F, Section 27, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.189307°, -103.870133°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On March 16, 2015, the stuffing box packing failed, and the E-pot designed to shut down the well and control the fluids failed to properly operate. As a result, approximately 13 barrels (bbls) of crude oil and 13 bbls of produced water were released. The release impacted approximately 9,537 square feet of caliche well pad and misted approximately 15,000 square feet of well pad and 9,000 square feet of pasture north of the pad. A vacuum truck recovered approximately 3 bbls of crude oil and 2 bbls of produced water and the saturated surface soil was scraped and removed for disposal. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on March 19, 2015. The release was assigned Remediation Permit (RP) Number 2RP-2900 and Incident Number nAB1507941546.

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.

BACKGROUND

The October 16, 2019, *Closure Request* detailed site characterization according to Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. 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: 20,000 mg/kg

Between April 2018 and June 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the March 16, 2015, crude oil and produced water release. Closure was requested on October 16, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the October 16, 2019, *Closure Request*.

On March 23, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1507941546 for following reason:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

In response to the denial, XTO submitted a *Remediation Work Plan* (*Work Plan*) to the NMOCD on June 29, 2023. The *Work Plan* proposed to install a soil boring within 0.5 miles of the Site to investigate depth to groundwater and confirm the Closure Criteria at the Site. The *Work Plan* was approved by the NMOCD on June 30, 2023.

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

As outlined in the June 29, 2023 *Work Plan*, XTO proceeded with the installation of a soil boring for determination of groundwater depth and confirmation of the Site Closure Criteria. During August 2023, a borehole, permitted as New Mexico Office of the State Engineer (NMOSE) well C-04761, was advanced to a depth of 115 feet bgs via air rotary drill rig. The borehole was located approximately 0.48 miles northeast of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or saturated soil indicative of a groundwater table was observed during drilling of the soil boring. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the Table I Closure Criteria identified in the original Closure Request are applicable and appropriate for protection of groundwater at this Site.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the March 16, 2015, release of crude oil and produced water. Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site as presented in this addendum and laboratory analytical results for the final excavation and delineation soil samples compliant with the Site Closure Criteria, as documented in the October 16, 2019 *Closure Request*, XTO respectfully requests no further action for Incident Number nAB1507941546. The October 16, 2019, Closure Request is included as Appendix B.

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

Ashley Ager, P.G.
Program Director

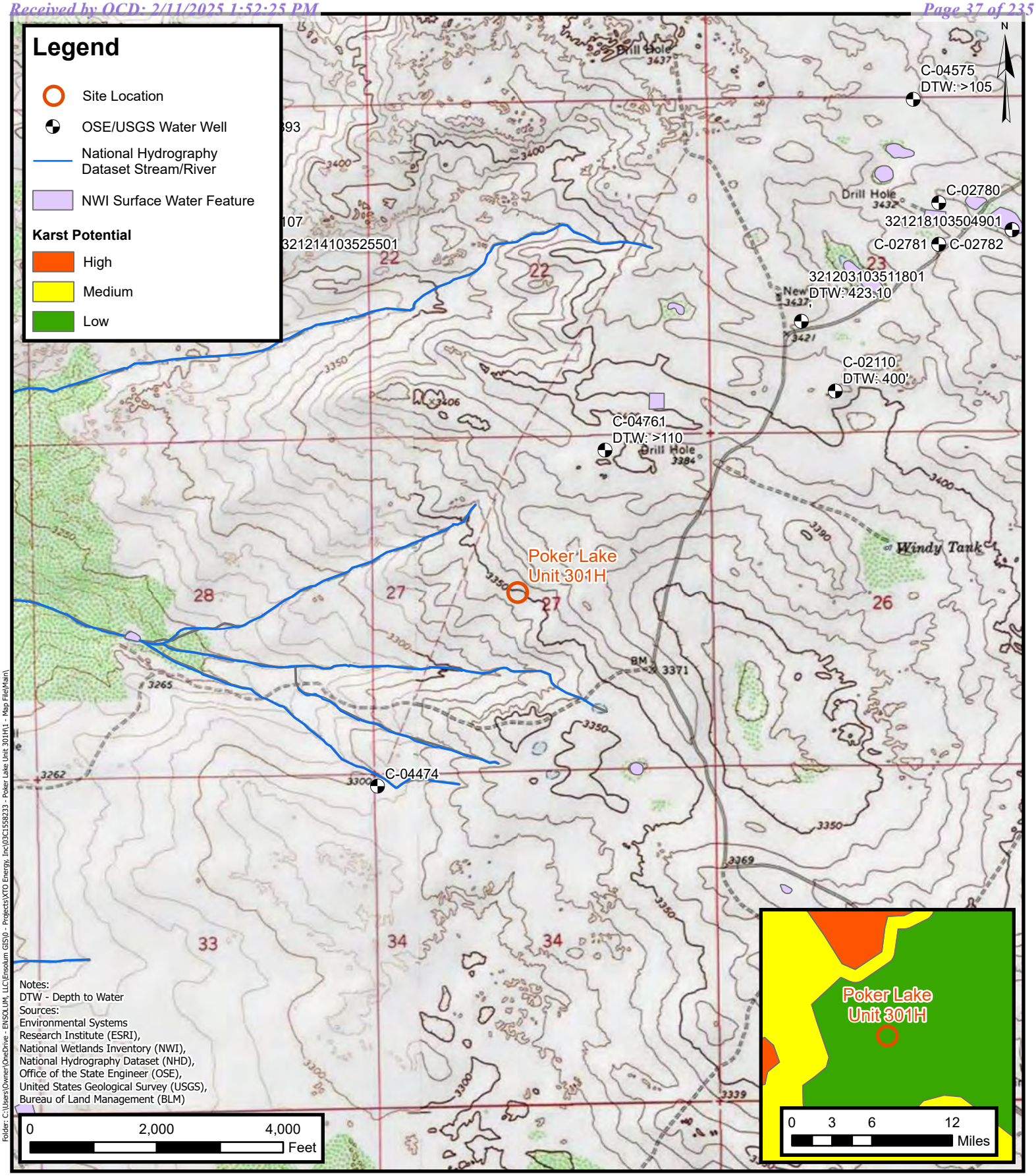
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Appendix A	Referenced Well Records
Appendix B	October 16, 2019 Closure Request

ENSOLUM

FIGURES



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558233 - Poker Lake Unit 301H1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
Poker Lake Unit 301H
Incident Number: nAB1507941546
Unit F, Section 27, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE 1

ENSOLUM

APPENDIX A

Referenced Well Records

ENSOLUM

Sample Name: BH01 / C-04761	Date: 8/3/2023	
Site Name: PLU-301H		
Incident Number: nAB1507941546		
Job Number: 03C1558233		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: Air Rotary
Coordinates: 32.195553, -103.864656	Hole Diameter: 5"	Total Depth: 115' bgs
Comments: No field screenings conducted.		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0'-20' CALICHE, white/tan, medium to coarse grains with small pebbles, sub-angular to sub-rounded grains, poorly sorted, slightly moist.
						10		
						20	SP	20'-30' SAND, medium brown/ orange, medium grained, sub-rounded, poorly sorted, moist.
						30		30'-40' SAND with trace caliche, medium brown/ orange, medium grained, sub-rounded grains, poorly sorted, moist.
						40		40'-90' SAND, orange, medium grained, poorly sorted with high quartz content, moist. Injected water and foaming agent @ 40' bgs.
						50		
						60		@ 52' bgs, hole collapsed due to sandy conditions. No evidence of water throughout drilling process.
						70		
						80		
						90	SP-SM	90'-115' SAND with some silt, orange/brown, primarily fine grained, poorly sorted.
						100		
						110		
						TD		Total Depth @ 115' bgs.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749177
File Nbr: C 04761

Jul. 24, 2023

BENJAMIN BELILL
ENSOLUM LLC
3122 NATIONALS PARKS HIGHWAY
CARLSBAD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Rodolfo Chavez
(575)622-6521

Enclosure

explore

File No. C-04761 POD1

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐	Pollution Control And/Or Recovery	☐	Ground Source Heat Pump	
☐ Exploratory Well (Pump test)	☐	Construction Site/Public Works Dewatering	☐	Other(Describe):	
☒ Monitoring Well	☐	Mine Dewatering			

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 7/21/2023 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: XTO Energy, Inc	Name: Ensolum, LLC
Contact or Agent: check here if Agent ☐ Garrett Green	Contact or Agent: check here if Agent ☒ Benjamin Belill
Mailing Address: 3401 E. Greene Street	Mailing Address: 3122 National Parks Highway
City: Carlsbad	City: Carlsbad
State: New Mexico Zip Code 88220	State: New Mexico Zip Code: 88220
Phone: 575-200-0729 ☐ Home ☒ Cell Phone (Work):	Phone: 989-854-0852 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): Garrett.Green@ExxonMobil.com	E-mail (optional): bbelill@ensolum.com

OSE DII JUL 7 2023 AM 10:56

FOR OSE INTERNAL USE Application for Permit, Form WR-07 Rev 11/17/16

File No.: C-04761	Tm. No.: 749177	Receipt No.: 2-45957
Trans Description (optional):		
Sub-Basin: CUB	PCW/LOG Due Date: 7/24/24	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
BH01 C-04761 POD1	-103.865615	32.195408	Unit B, Sec 27, T24S, R30E, Eddy County

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
Located on active well pad facility at the the Poker Lake Unit 450Y (32.195408, -103.865615).

Well is on land owned by: Federal - Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 110	Outside diameter of well casing (inches): 2
Driller Name: Scarborough Drilling	Driller License Number: WD-1188

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

One soil boring to be advanced at the site to assess subsurface soil and regional groundwater depth. Temporary 2-inch inside diameter PVC well screen will be placed in open borehole to determine depth to water at the site. The borehole will be abandoned after 72 hours from the time the borehole is completed. The borehole location is depicted on the attached figure.

OSE OII JUL 7 2023 AM 10:56

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-04761 POD1	Trn No.: 749177

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Benjamin Belill
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief

Benjamin Belill Digitally signed by Benjamin Belill
Date: 2023.07.06 10:29:42 -04'00'
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 24th day of July 20 23, for the State Engineer,

Mike A. Hamman, P.E., State Engineer

OSE OIL JUL 7 20[illegible]

By: K. Parekh
Signature

Kashyap Parekh
Print

Title: Water Resource Manager I
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: C-04761 POD1 Trn No.: 749177

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04761 POD1 must be completed and the Well Log filed on or before 07/23/2024.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 07/24/2023	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 24 day of Jul A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K-Parekh
KASHYAP PAREKH

GREAT SEAL OF THE STATE OF NEW MEXICO * 1912 *

Trn Desc: C 04761 POD1

File Number: C 04761
Trn Number: 749177

ENSOLUM

APPENDIX B

October 16, 2019 Closure Request

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

October 16, 2019

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

RE: Closure Request
Poker Lake Unit 301H
Remediation Permit Number 2RP-2900
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Poker Lake Unit 301H (Site) in Unit F, Section 27, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure 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 IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

RELEASE BACKGROUND

On March 16, 2015, the stuffing box packing failed and the E-pot designed to shut down the well and control the fluids failed to properly operate. As a result, approximately 13 barrels (bbls) of crude oil and 13 bbls of produced water were released. The release impacted approximately 9,537 square feet of caliche well pad and misted approximately 15,000 square feet of well pad and 9,000 square feet of pasture north of the pad. A vacuum truck recovered approximately 3 bbls of crude oil and 2 bbls of produced water and the saturated surface soil was scraped and removed for disposal. 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 March 19, 2015, and was assigned Remediation Permit (RP) Number 2RP-2900 (Attachment 1).

Although the 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. Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release event.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is NM OSE Well C02110, located approximately 5,950 feet northeast of the Site. The water well has a depth to groundwater of 400 feet and a total depth of 600 feet. Ground surface elevation at the water well location is 3,412 feet above mean sea level (AMSL), which is approximately 61 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream located approximately 1,205 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On April 9, 2018, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed on the well pad release area. An LTE scientist collected three preliminary soil samples (SS1A through SS1C) within the release area to assess the lateral extent of impacted soil. The soil sample locations, 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 bgs. 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 shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The preliminary soil sample locations are depicted on Figure 2.

Between January and June 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Potholes were advanced via backhoe at eleven locations on the well pad and pasture area north of the pad to assess for soil impacts. Potholes PH01 through PH11 were advanced to a depth of 4 feet bgs. Two delineation soil samples were collected from each pothole from depths of 2 feet and 4 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by visual observations, potholing activities, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 5 feet bgs. Composite soil samples FS01 through FS09 were collected from the floor of the excavation from depths ranging from 3 feet to 6 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 4.

The delineation and excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco Laboratories (Xenco) in Midland, Texas. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The excavation measured approximately 2,500 square feet in area. A total of approximately 370 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS1A and SS1C. Laboratory analytical results indicated that GRO/DRO, TPH, and chloride concentrations exceeded the Closure Criteria in preliminary soil sample SS1B. Based on the preliminary soil sample analytical results, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH011, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation soil samples SW01 through SW03 and FS01 through FS09, collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the release area to address impacts to soil resulting from a historical release of crude oil and produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed in and around the release extent. Laboratory analytical results for the delineation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-2900. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Bryan Paraspolo
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-2900)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

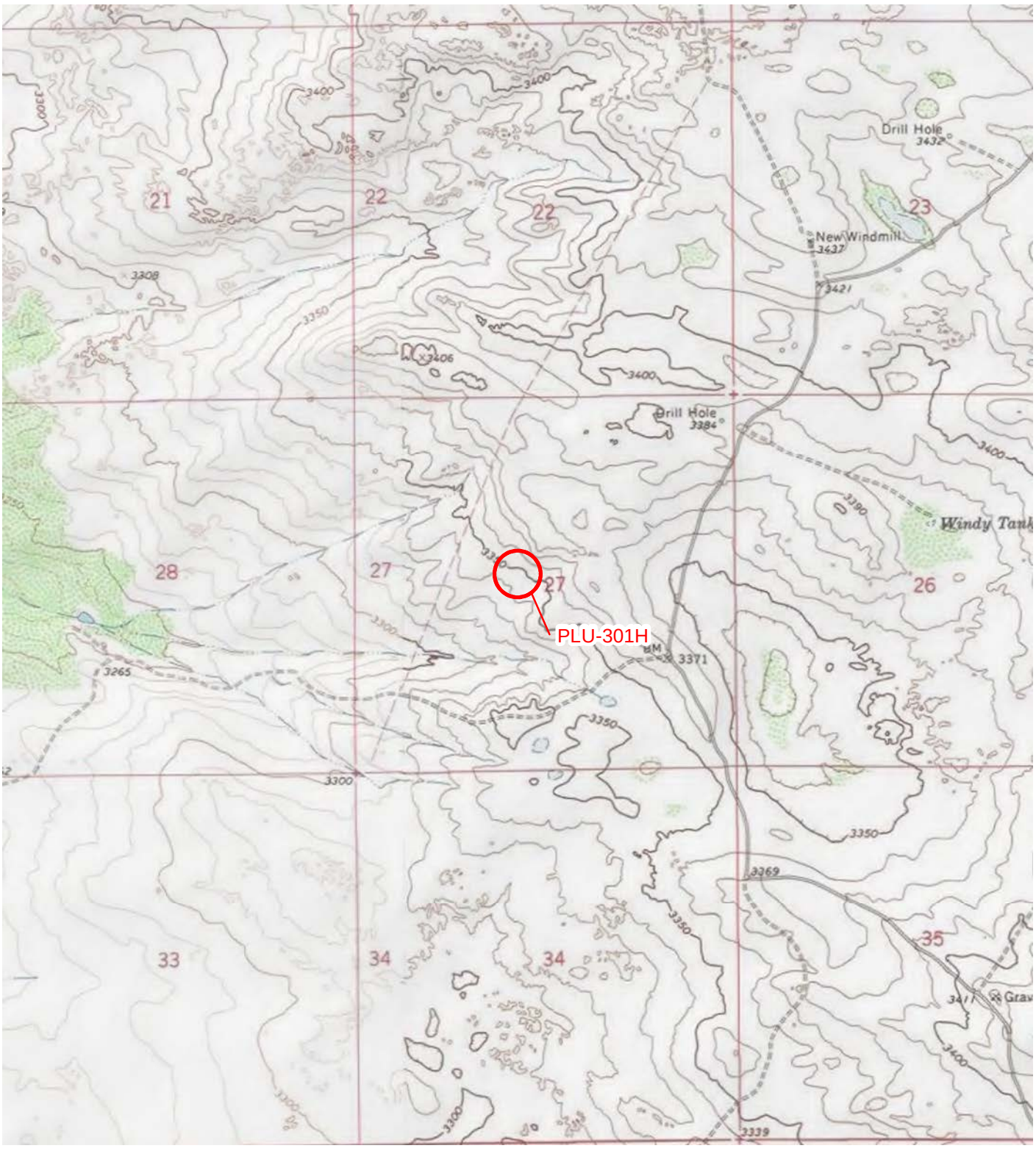


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

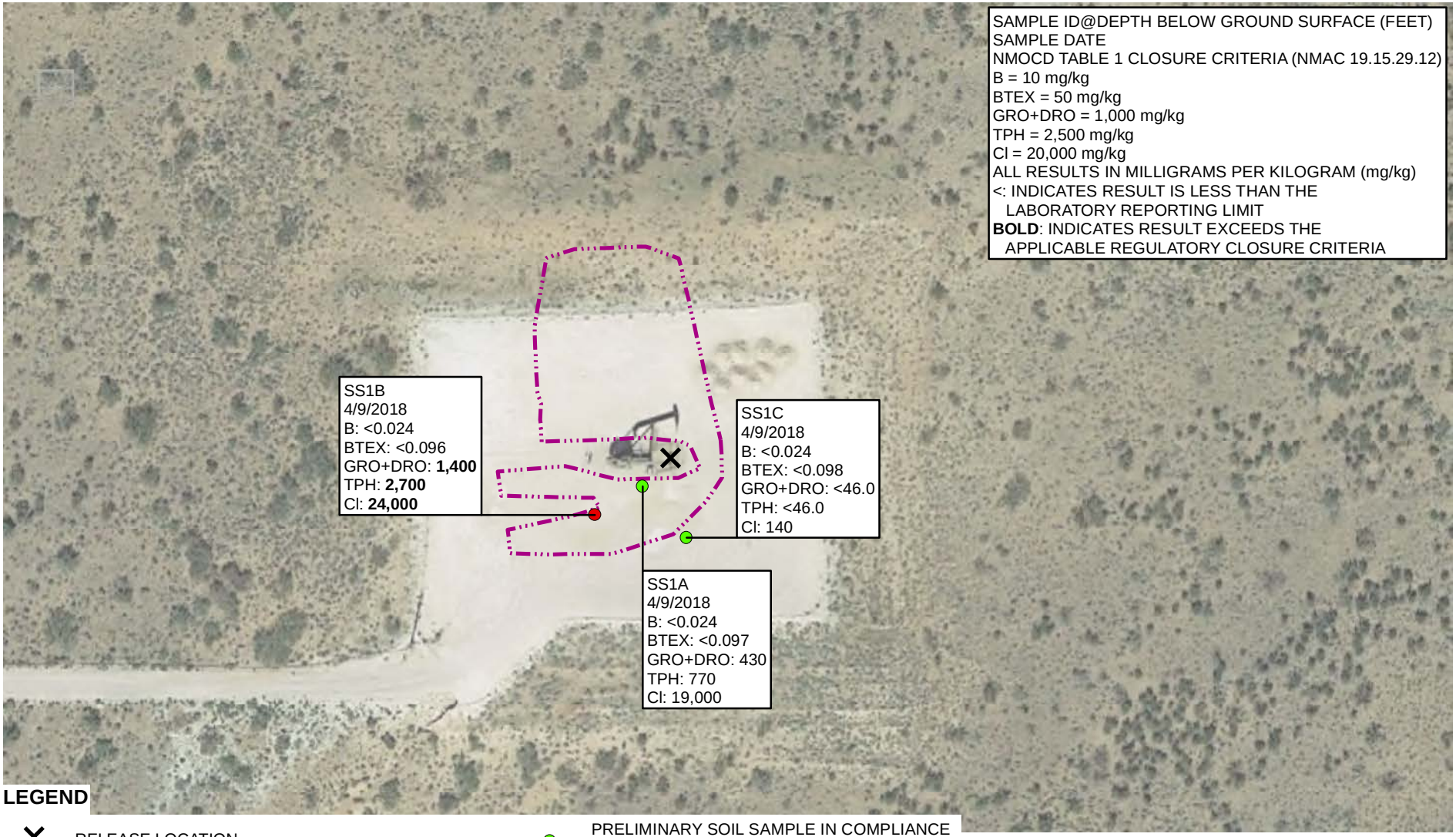
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-2900

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT-301H
UNIT F SEC 27 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918085_PLU-301H\012918085_FIG01_SL_2018_2900.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE
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-2900

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT-301H
UNIT F SEC 27 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918085_PLU-301H\012918085_FIG02_PRELIMINARY_2900.mxd

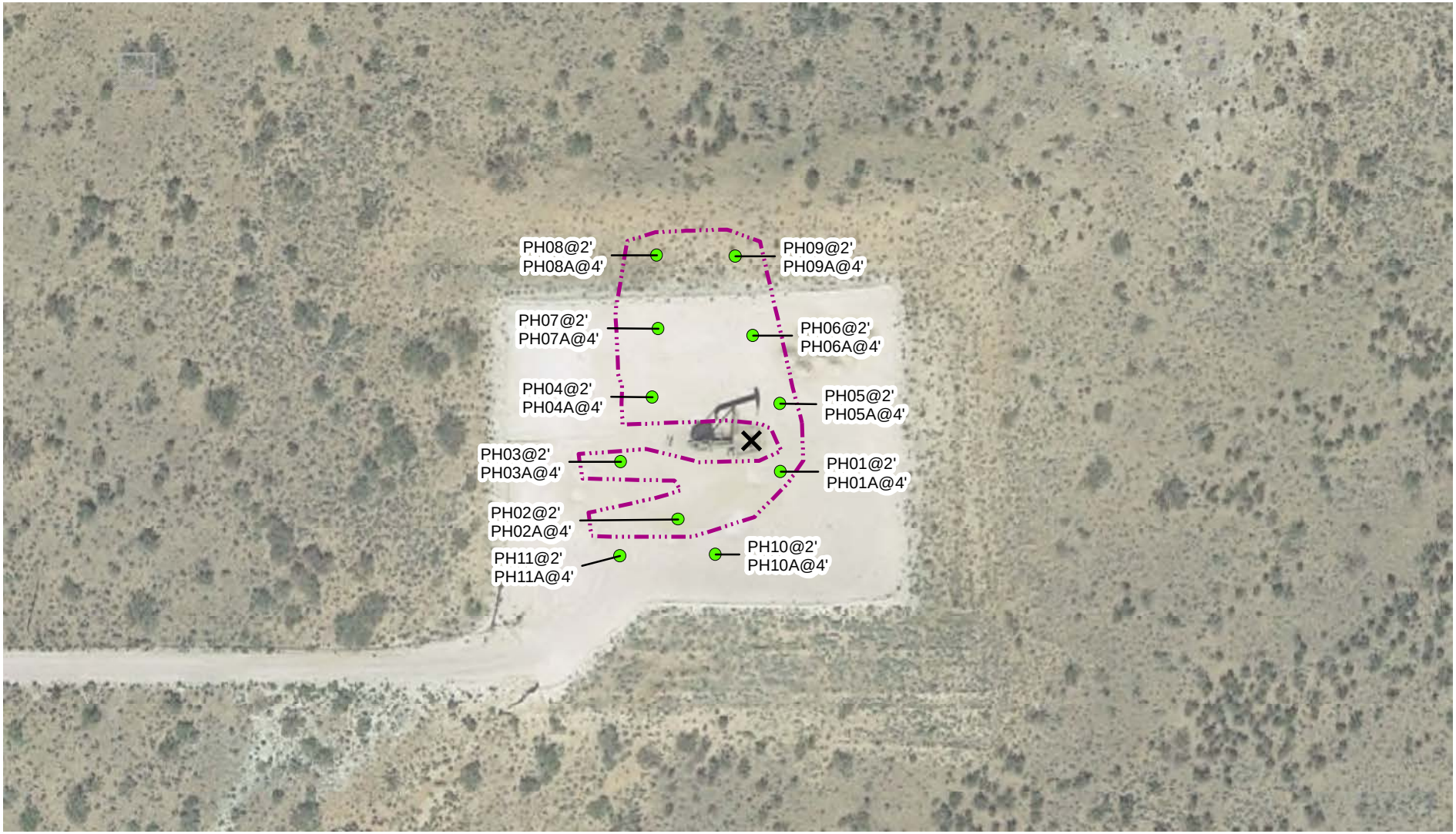


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-2900

0 100 200
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 301H
UNIT F SEC 27 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918085_PLU-301H\012918085_FIG03_DELINEATION_2900.mxd

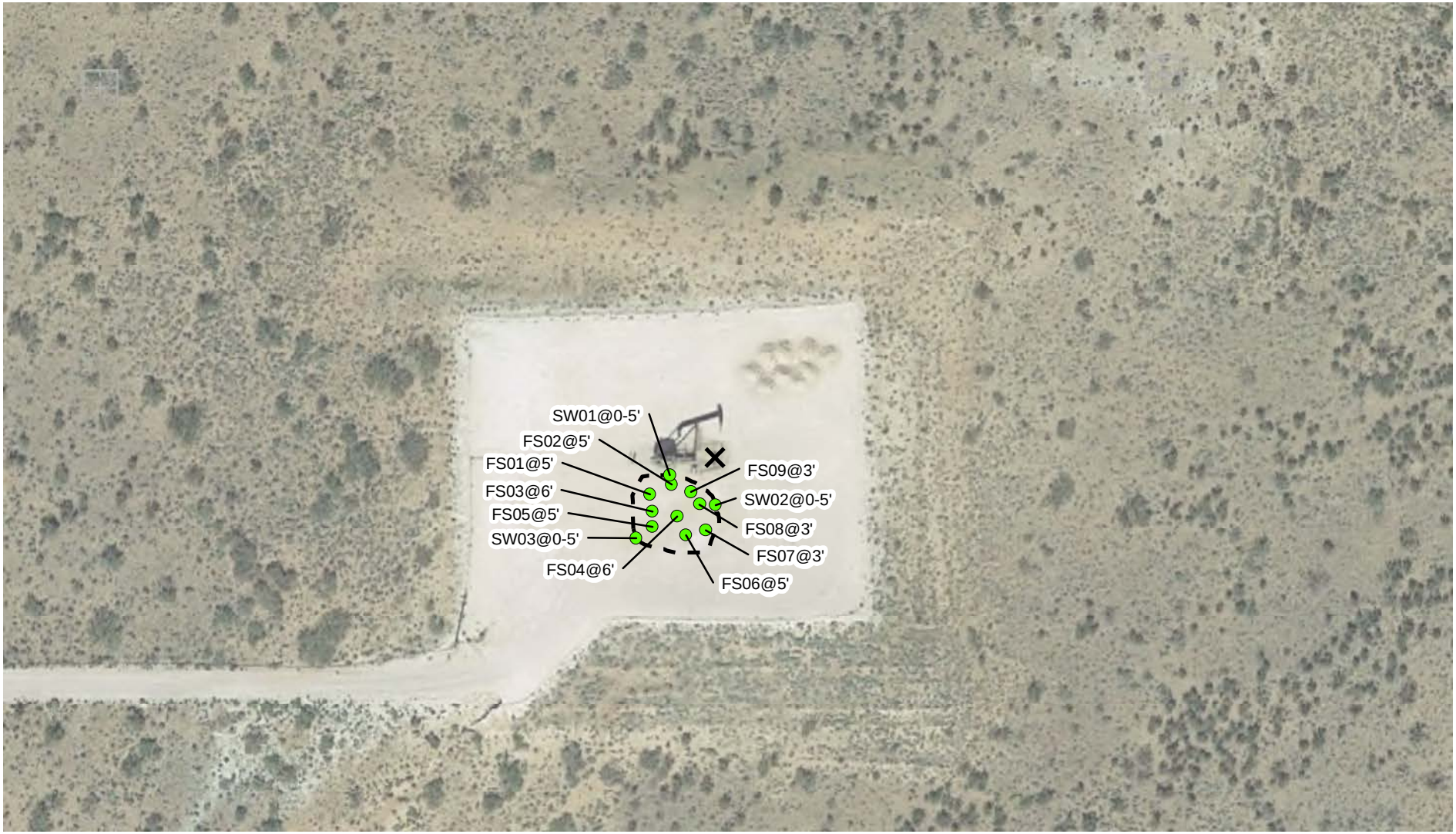


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH FIELD SCREENING IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-2900

0 100 200
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 301H
UNIT F SEC 27 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918085_PLU-301H\012918085_FIG04_EXCAVATION_2900.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT - 301H
REMEDIATION PERMIT NUMBER 2RP-2900
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)
SS1A	0.5	04/09/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	430	340	430	770	19,000
SS1B	0.5	04/09/2018	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	1,400	1,300	**1,400**	**2,700**	**24,000**
SS1C	0.5	04/09/2018	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.3	<46.0	<9.3	<46	140
PH01	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	22.6
PH02	2	01/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	2,940
PH03	2	01/07/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	379
PH04	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	534
PH05	2	01/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	298
PH06	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	437
PH07	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	208
PH08	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	15.8
PH09	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	44.3
PH10	2	01/07/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	25.1
PH11	2	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	47.8
PH01A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	15.5	<15.0	15.5	15.5	566
PH02A	4	01/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	14.5
PH03A	4	01/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	487
PH04A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	94.3
PH05A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	295
PH06A	4	01/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	352
PH07A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	144
PH08A	4	01/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	8.39
PH09A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	11.9
PH10A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH11A	4	01/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT - 301H
REMEDIATION PERMIT NUMBER 2RP-2900
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)
SW01	0-5	06/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	613
SW02	0-5	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	501
SW03	0-5	06/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	938
FS01	5	06/07/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	319
FS02	5	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	175
FS03	6	06/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
FS04	6	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	256
FS05	5	06/07/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	481
FS06	5	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	423
FS07	3	06/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	209
FS08	3	06/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	183
FS09	3	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	185
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ND - Not Detected at the Reporting Limit
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
N/A - Not Assigned
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-2900)

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 19 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

nAB1507941546 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-301H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-36924

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	27	24S	30E	2460	North	2310	West	Eddy

Latitude N 32.189307 **Longitude** W 103.870133

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 13 Bbls crude oil and 13 Bbls PW	Volume Recovered: 3 Bbls crude oil and 2 Bbls PW
Source of Release: Stuffing box	Date and Hour of Occurrence: 3/16/15 time unknown	Date and Hour of Discovery: 3/16/15 at approximately 4:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD and BLM	
By Whom? Brad Blevins	Date and Hour: 3/16/15 at approx. 5:00 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The stuffing box packing failed, the E-pot designed to shut down the well and control fluids failed to operate properly. The well was shut in. Repair crews re-aligned the well and replaced the stuffing box on 3/17/15.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 9,537 of caliche well pad with standing puddles and flow paths. It also misted approximately 15,000 sq.ft. of pad and approximately 9,000 sq.ft. of pasture area with a light mist. Crews washed down the rig and all of the free standing fluid was recovered. EPI remediation crew responded on 3/17/15. The saturated soil was scraped up, 20 cubic yards of soil was hauled to Lea Lands

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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 3/19/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By: Mike Bratcher

Approval Date: 3/20/15 Expiration Date: N/A

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/20/15

Attached ☐

2RP-2900

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-2900
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-2900
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.189307 Longitude W 103.870133
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU 301H	Site Type: Production Well Facility
Date Release Discovered: 3/16/2015	API# *(if applicable):* 30-015-36924

Unit Letter	Section	Township	Range	County
F	27	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 13	Volume Recovered (bbls): 3
☒ Produced Water	Volume Released (bbls): 13	Volume Recovered (bbls): 2
	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
The stuffing box packing failed, the E-pot designed to shut down the well and control fluids failed to operate properly.
The release impacted approximately 9,537 of caliche well pad and misted approximately 15,000 sq.ft. of pad and approximately 9,000 sq.ft. of pasture area with a light mist. The saturated soil was scraped up, 20 cubic yards of soil was hauled to Lea Lands.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2900
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? Release greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Brad Blevins to NMOCD and BLM on 3-16-2015.	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/15 /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-2900
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2900
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/15/2019

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-2900
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/15/2019

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

OCD Only

Received by: Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring Number: 1					Date: 1-7-19	
Project: PLU 301H					Project Number: 012918085	
Logged By: Benjamin Belill					Drilled By: Valentine Construction	
Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 8'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry	1.2	N		0	0910	Caliche	Dry, moderately consolidated, light brown, caliche, fill, cl^- = <112 ppm
	moist		N		1		SAND	moist, brn-drk brn, m-f silty SAND, (SM) (Alluvium)
		0.9	N	PH01	2	0915		cl^- = <112 ppm
					3			
		3.2	N	PH01A	4	0920		cl^- = 396 ppm
					5			
					6			
					7			
					8			
	moist	3.3	N		9	0935	SAND	moist, lt brn-tan, m. SAND, trace silt (SP-SC) cl^- = <112 ppm
					10			EOP
					11			

Page of

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

Boring Number: 2	Date: 1-7-19
Project: PLU 30111	Project Number: 02218085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction
Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
---	---	---	---	---	---	---
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry		Sl		0		Caliche	Dry, light brown-tan, moderately consolidated, caliche, fill,
	moist	1.6	Sl		1	1000	SAND	Moist, brn-dark brn, m.-f. silty SAND (SM) (Alluvium) cL⁻ = 3,168ppm
		1.5		PH02	2	1010		cL⁻ = 3,168ppm
	Dry		N		3		SAND	Dry, brn-dark brn, m.-f. silty SAND (SM), (Alluvium)
		2.6		PH02A	4	1025		cL⁻ = 5112 ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

Page of

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

Boring Number: 3	Date: 1-7-19
Project: PLU 301H	Project Number: 0129 18085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry	39.2	Y		0	1100	caliche	Dry, light brn - tan, mod. consolidated, caliche fill. $Cl^- = 1958$ ppm
	Dry				1		Sand	Dry, brown - dark brown, m. - f. silty SAND (SM) (Alluvium)
		3.5	N	PH03	2	1110		$Cl^- = 473$ ppm
					3			
	Dry	6.5	N	PH03A	4	1120		$Cl^- = <112$ ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

Page of

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

Boring Number: 4	Date: 1-7-19
Project: PLU 301H	Project Number: 012918085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry	1.6	N		0	1230	Caliche	Dry, light brown - tan, mod. consolidated, caliche fill. $cl^- = 2,956$ ppm
	Dry		N		1		Sand	Dry, dark brown - brown, m. - f. silty SAND, (SM) (Alluvium)
		2.6	N	PH04	2	1235		$cl^- = 473$ ppm
					3			
	Dry	1.5	N	PH04A	4	1240		$cl^- = 112$ ppm
								EOP
					5			
					6			
					7			
					8			
					9			
					10			
					11			

Page of

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

Boring Number: 5	Date: 1/7/19
Project: PLU 301H	Project Number: 01291808S
Logged By: Benjamin Belill	Drilled By: Unlimited Construction
Sampling Method: Continuous	Hole Diameter: / Total Depth: 4'
Slot Length: NA	Depth to Water: NA

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry	2.1	N		0	1300	Caliche	Dry, light brown-tan, mod. consolidated, caliche, fill. $Cl^- = <112$
	moist		N		1		SAND	Moist, dark brown, m,-f. silty SAND, (SM), (Alluvium)
		3.9	N	PHOS	2	1305		$Cl^- = <112$ ppm
					3			
	moist	2.6	N	PHOSA	4	1310		$Cl^- = <112$ ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

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

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring Number: 6	Date: 1-7-19				
Project: PLU 301 H	Project Number: 6129 18085				
Logged By: Benjamin Belill	Drilled By: Unlimited Construction				
Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry				0		caliche	Dry, light brown - tan, mod. consolidated caliche, fill
	moist		N		1		SAND	Moist, brown - red, m. - f. silty SAND, (SM), (Alluvium)
		1.6	N	PH06	2	1350		$Cl^- = 473$ ppm
					3			
	Moist	2.0	N	PH06A	4	1355		$Cl^- = 326$ ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

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

Boring Number: 7	Date: 1/7/19
Project: PLV 301H	Project Number: 012918085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry		N		0		caliche	Dry, light brown-tan, moderately consolidated, caliche, fill
	moist		N		1		SAND	moist, brown - red, m. - f. silty SAND, (SM), (Alluvium)
		2.8	N	PH07	2	1410		Cl⁻ = 192 ppm
					3			
	moist	2.5		PH07A	4	1415		Cl⁻ = 112 ppm
								EOP
					5			
					6			
					7			
					8			
					9			
					10			
					11			

Page of

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

Boring Number: 8	Date: 1-7-19
Project: PLU 301H	Project Number: 0129 18085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
					0		SAND	Moist, brown-red, m.-f. silty SAND, (SM) (Alluvium)
	moist	3.2	N	PH08	1 2 3	1440		cl⁻ = <112
	moist	2.6	N	PH08A	4	1445	SAND	moist, brown, m.-f. SAND, trace silt, roots, (SP-SM) cl⁻ = <112 ppm
					5 6 7 8 9 10 11			EOP

Page of

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

Boring Number: 9	Date: 1-7-19
Project: PLU 301H	Project Number: 012918085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
					0		SAND	Moist, brown - red, m. -f. silty SAND, (SM) (Alluvium)
	Moist	2.2	N	PH01	1	1505		cl⁻ = <112
					2			
					3			
	Moist	2.5	N	PH01A	4	1510	SAND	Moist, light brown, m. -f. ~~SAND~~ Poorly graded SAND, trace silt (SP-SM) cl⁻ = <112
								EOP
					5			
					6			
					7			
					8			
					9			
					10			
					11			

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

Boring Number	Date
10	1-7-19
Project	**Project Number**
PLU 301H	012918085
Logged By	**Drilled By**
Benjamin Belill	Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long	Elevation	Detector	Drilling Method	Sampling Method	Hole Diameter	Total Depth
		PID	Backhoe	Continuous		4'

Casing Type	Casing Diameter	Casing Length	Slot Size	Slot Length	Depth to Water
NA	NA	NA	NA	NA	NA

Gravel Pack	Seal	Grout	Comments
NA	NA	NA	

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
	Dry				0			Dry, light brown - tan, mod. consolidated, caliche, fill
	moist	2.7	N	PH10	1	1530		moist, brown - red, m. - f. silty SAND, ~~[illegible]~~ (SM) ~~[illegible]~~, trace roots, (Alluvium)
					2			Cl^- = < 112 ppm
	Dry				3			Dry, brown - red, m. - f. silty ~~SAND~~, (SM) trace roots, (Alluvium)
		2.5	N	PH10A	4	1535		Cl^- = < 112 ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

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

Boring Number: 11	Date: 1-7-19
Project: PLU 30 1H	Project Number: 012918085
Logged By: Benjamin Belill	Drilled By: Unlimited Construction

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long:	Elevation:	Detector: PID	Drilling Method: Backhoe	Sampling Method: Continuous	Hole Diameter:	Total Depth: 4'
Casing Type: NA	Casing Diameter: NA	Casing Length: NA	Slot Size: NA	Slot Length: NA	Depth to Water: NA	
Gravel Pack: NA	Seal: NA	Grout: NA	Comments:			

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks
					0		Caliche	Dry, lt brown - tan, mod. consolidated, caliche fill.
	moist	1.5	N		1		SAND	Moist, brown - red, m. - f. silty SAND, (SM), (Alluvium)
		1.5	N	PH 11	2	1550		Cl⁻ = <112 ppm
					3		SAND	Dry, brown - red, m. - f. silty SAND, (SM), (Alluvium)
	Dry	1.9	N	PH 11A	4	1555		Cl⁻ = <112 ppm
					5			EOP
					6			
					7			
					8			
					9			
					10			
					11			

Page of

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View release location prior to excavation, facing northwest.

Photograph 2: View release location prior to excavation, facing west.

Photograph 3: View release location prior to excavation, facing southwest.

Photograph 4: View release location prior to excavation, facing southeast.

Poker Lake Unit 301H (2RP-2900)
Eddy County, New Mexico
Photographs Taken: January 7 and June 7, 2019

PHOTOGRAPHIC LOG

Photograph 5: View of open excavation facing southwest.

Photograph 6: View of open excavation facing north.

Photograph 7: View of open excavation facing west.

Photograph 8: View of open excavation facing south.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

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

April 24, 2018

Adrian Baker
LTE
3300 N A St Bldg 1 #103
Midland, TX 79705
TEL: (432) 704-5178
FAX

RE: PLU 301H OrderNo.: 1804858

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/17/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1804858**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE
Client Sample ID: SS1A
Project: PLU 301H
Collection Date: 4/9/2018 1:30:00 PM
Lab ID: 1804858-001 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	19000	750		mg/Kg	500	4/24/2018 12:42:47 PM	37741
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	430	10		mg/Kg	1	4/20/2018 1:16:33 PM	37670
Motor Oil Range Organics (MRO)	340	50		mg/Kg	1	4/20/2018 1:16:33 PM	37670
Surr: DNOP	101	70-130		%Rec	1	4/20/2018 1:16:33 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Surr: BFB	83.2	15-316		%Rec	1	4/18/2018 10:04:21 PM	37653
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Benzene	ND	0.024		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Toluene	ND	0.049		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Xylenes, Total	ND	0.097		mg/Kg	1	4/18/2018 10:04:21 PM	37653
Surr: 4-Bromofluorobenzene	76.9	80-120	S	%Rec	1	4/18/2018 10:04:21 PM	37653

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

Qualifiers:

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

Analytical Report
Lab Order **1804858**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** SS1B
Project: PLU 301H **Collection Date:** 4/9/2018 1:35:00 PM
Lab ID: 1804858-002 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	24000	1500		mg/Kg	1E	4/24/2018 12:55:12 PM	37741
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1400	99		mg/Kg	10	4/19/2018 7:40:28 PM	37670
Motor Oil Range Organics (MRO)	1300	500		mg/Kg	10	4/19/2018 7:40:28 PM	37670
Surr: DNOP	0	70-130	S	%Rec	10	4/19/2018 7:40:28 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Surr: BFB	81.6	15-316		%Rec	1	4/18/2018 10:27:52 PM	37653
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Benzene	ND	0.024		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Toluene	ND	0.048		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2018 10:27:52 PM	37653
Surr: 4-Bromofluorobenzene	73.6	80-120	S	%Rec	1	4/18/2018 10:27:52 PM	37653

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

Qualifiers:

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

Analytical Report
Lab Order **1804858**
Date Reported: **4/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** SS1C
Project: PLU 301H **Collection Date:** 4/9/2018 1:45:00 PM
Lab ID: 1804858-003 **Matrix:** SOIL **Received Date:** 4/17/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	140	30		mg/Kg	20	4/23/2018 3:13:20 PM	37741
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/19/2018 8:04:20 PM	37670
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2018 8:04:20 PM	37670
Surr: DNOP	88.0	70-130		%Rec	1	4/19/2018 8:04:20 PM	37670
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Surr: BFB	86.2	15-316		%Rec	1	4/18/2018 10:51:20 PM	37653
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Benzene	ND	0.024		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Toluene	ND	0.049		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Xylenes, Total	ND	0.098		mg/Kg	1	4/18/2018 10:51:20 PM	37653
Surr: 4-Bromofluorobenzene	75.8	80-120	S	%Rec	1	4/18/2018 10:51:20 PM	37653

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804858**

24-Apr-18

Client: LTE

Project: PLU 301H

Sample ID	**MB-37741**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37741**	RunNo:	**50775**					
Prep Date:	**4/23/2018**	Analysis Date:	**4/23/2018**	SeqNo:	**1647500**	Units:	**mg/Kg**			

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

Sample ID	**LCS-37741**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37741**	RunNo:	**50775**					
Prep Date:	**4/23/2018**	Analysis Date:	**4/23/2018**	SeqNo:	**1647501**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804858**

24-Apr-18

Client: LTE

Project: PLU 301H

Sample ID	**LCS-37670**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**37670**		RunNo:	**50693**				
Prep Date:	**4/18/2018**	Analysis Date:	**4/19/2018**		SeqNo:	**1644506**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.0	70	130			
Surr: DNOP	4.2		5.000		84.7	70	130			

Sample ID	**MB-37670**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**37670**		RunNo:	**50693**				
Prep Date:	**4/18/2018**	Analysis Date:	**4/19/2018**		SeqNo:	**1644507**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804858**

24-Apr-18

Client: LTE

Project: PLU 301H

Sample ID	**MB-37653**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**37653**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643677**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.5	15	316			

Sample ID	**LCS-37653**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**37653**	RunNo:	**50648**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643678**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	75.9	131			
Surr: BFB	950		1000		95.4	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804858**

24-Apr-18

Client: LTE

Project: PLU 301H

Sample ID	**MB-37653**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**PBS**	Batch ID:	**37653**	RunNo:	**50648**
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643711** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.81		1.000		81.2	80	120			

Sample ID	**LCS-37653**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**LCSS**	Batch ID:	**37653**	RunNo:	**50648**
Prep Date:	**4/17/2018**	Analysis Date:	**4/18/2018**	SeqNo:	**1643712** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.86	0.10	1.000	0	86.0	70.1	121			
Benzene	0.95	0.025	1.000	0	95.1	77.3	128			
Toluene	0.95	0.050	1.000	0	95.0	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	94.9	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	97.2	81.6	129			
Surr: 4-Bromofluorobenzene	0.82		1.000		81.8	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE MIDLAND Work Order Number: 1804858 RcptNo: 1

Received By: Isaiah Ortiz 4/17/2018 9:05:00 AM IG

Completed By: Isaiah Ortiz 4/17/2018 11:03:28 AM IG

Reviewed By: DDS 4/17/18

MW 4/17/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted? MW 4/17/18
Checked by:

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			

Chain-of-Custody Record

Client: LTE / Midland
XTO Energy
Mailing Address: 3300 N. A Street Bldg 1, #103
Midland, TX
Phone #: 432-894-5641
email or Fax#: abaker@lteenv.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time: 5day
☒ Standard ☐ Rush
Project Name: PLU 30/1H
Project #: 30-015-36924 (2RP-2906)
Project Manager: Adrian Baker
Sampler: Eric Carroll
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.7+0.3(CF)=4.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804858	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride				Air Bubbles (Y or N)
4/6/18	1330	S	SS1A	1 4oz	Cooler	001	X		X									X				
↓	1335	S	SS1B	↓	↓	002	X		X									X				
↓	1345	S	SS1C	↓	↓	003	X		X									X				

Date: 4/16 Time: 0630 Relinquished by:
Received by: Date 4/16/18 Time 1900
Date: 4/16/18 Time: 1900 Relinquished by:
Received by: Courier 4/17/18 ENM Date 4/17/18 Time 0905

Remarks:

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

Analytical Report 611129

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 301 H

2RP-2900

21-JAN-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)
Xenco-Lakeland: Florida (E84098)

21-JAN-19

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

Reference: XENCO Report No(s): **611129**
PLU 301 H
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611129. 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. 611129 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 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	01-07-19 09:15	2 ft	611129-001
PH01A	S	01-07-19 09:20	4 ft	611129-002
PH02	S	01-07-19 10:10	2 ft	611129-003
PH02A	S	01-07-19 10:25	4 ft	611129-004
PH03	S	01-07-19 11:10	2 ft	611129-005
PH03A	S	01-07-19 11:20	4 ft	611129-006
PH04	S	01-07-19 12:35	2 ft	611129-007
PH04A	S	01-07-19 12:40	4 ft	611129-008
PH05	S	01-07-19 13:05	2 ft	611129-009
PH05A	S	01-07-19 13:10	4 ft	611129-010
PH06	S	01-07-19 13:50	2 ft	611129-011
PH06A	S	01-07-19 13:55	4 ft	611129-012
PH07	S	01-07-19 14:10	2 ft	611129-013
PH07A	S	01-07-19 14:15	4 ft	611129-014
PH08	S	01-07-19 14:40	2 ft	611129-015
PH08A	S	01-07-19 14:45	4 ft	611129-016
PH09	S	01-07-19 15:05	2 ft	611129-017
PH09A	S	01-07-19 15:10	4 ft	611129-018
PH10	S	01-07-19 15:30	2 ft	611129-019
PH10A	S	01-07-19 15:35	4 ft	611129-020
PH11	S	01-07-19 15:50	2 ft	611129-021
PH11A	S	01-07-19 15:55	4 ft	611129-022

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 301 H

Project ID: *2RP-2900*
Work Order Number(s): *611129*

Report Date: *21-JAN-19*
Date Received: *01/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075844 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3075858 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 610951-001 S,610951-001 SD.

Batch: LBA-3075983 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3076411 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7670004-1-BKS,7670004-1-BLK,7670004-1-BSD.
Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7670004-1-BLK.

Certificate of Analysis Summary 611129

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id: 2RP-2900
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611129-001		611129-002		611129-003		611129-004		611129-005		611129-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-07-19 09:15		Jan-07-19 09:20		Jan-07-19 10:10		Jan-07-19 10:25		Jan-07-19 11:10		Jan-07-19 11:20	
BTEX by EPA 8021B	***Extracted:***	Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 16:30		Jan-15-19 08:30		Jan-15-19 08:30	
	Analyzed:	Jan-15-19 14:05		Jan-15-19 14:24		Jan-15-19 14:43		Jan-15-19 23:49		Jan-15-19 16:54		Jan-15-19 17:13	
	Units/RL:	mg/kg	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	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00403	0.00403	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Jan-16-19 08:00		Jan-16-19 08:00		Jan-16-19 08:00		Jan-16-19 08:00		Jan-16-19 08:00		Jan-16-19 09:00	
	Analyzed:	Jan-16-19 13:45		Jan-16-19 13:51		Jan-16-19 13:58		Jan-16-19 14:04		Jan-16-19 14:10		Jan-16-19 14:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.6	4.98	566	4.98	2940	25.0	14.5	4.99	379	4.99	487	5.00
TPH by SW8015 Mod	***Extracted:***	Jan-15-19 10:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00	
	Analyzed:	Jan-15-19 21:51		Jan-16-19 10:45		Jan-16-19 11:05		Jan-16-19 12:04		Jan-16-19 12:24		Jan-16-19 12:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	15.5	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	15.5	15.0	<15.0	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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 611129

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id: 2RP-2900
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611129-007		611129-008		611129-009		611129-010		611129-011		611129-012	
	Field Id:	PH04		PH04A		PH05		PH05A		PH06		PH06A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-07-19 12:35		Jan-07-19 12:40		Jan-07-19 13:05		Jan-07-19 13:10		Jan-07-19 13:50		Jan-07-19 13:55	
BTEX by EPA 8021B	***Extracted:***	Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 08:30	
	Analyzed:	Jan-15-19 17:32		Jan-15-19 17:51		Jan-15-19 18:10		Jan-15-19 18:29		Jan-15-19 18:48		Jan-15-19 19:07	
	Units/RL:	mg/kg	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	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00402	0.00402	<0.00401	0.00401	<0.00400	0.00400	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00	
	Analyzed:	Jan-16-19 15:08		Jan-16-19 15:15		Jan-16-19 15:21		Jan-16-19 15:27		Jan-16-19 15:49		Jan-16-19 15:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		534	4.99	94.3	4.95	298	4.95	295	4.99	437	4.99	352	4.99
TPH by SW8015 Mod	***Extracted:***	Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00	
	Analyzed:	Jan-16-19 13:03		Jan-16-19 14:03		Jan-16-19 14:23		Jan-16-19 14:43		Jan-16-19 15:03		Jan-16-19 15:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 611129

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id: 2RP-2900
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611129-013		611129-014		611129-015		611129-016		611129-017		611129-018	
	Field Id:	PH07		PH07A		PH08		PH08A		PH09		PH09A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-07-19 14:10		Jan-07-19 14:15		Jan-07-19 14:40		Jan-07-19 14:45		Jan-07-19 15:05		Jan-07-19 15:10	
BTEX by EPA 8021B	***Extracted:***	Jan-15-19 08:30		Jan-15-19 08:30		Jan-15-19 16:30		Jan-15-19 16:30		Jan-15-19 16:30		Jan-15-19 16:30	
	Analyzed:	Jan-15-19 19:26		Jan-15-19 19:45		Jan-16-19 00:08		Jan-16-19 00:27		Jan-16-19 00:46		Jan-16-19 01:05	
	Units/RL:	mg/kg	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	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00	
	Analyzed:	Jan-16-19 16:01		Jan-16-19 16:07		Jan-16-19 16:22		Jan-16-19 16:28		Jan-16-19 16:47		Jan-16-19 16:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		208	4.95	144	4.99	15.8	5.00	8.39	4.96	44.3	4.99	11.9	4.98
TPH by SW8015 Mod	***Extracted:***	Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-15-19 17:00		Jan-17-19 10:00	
	Analyzed:	Jan-16-19 15:42		Jan-16-19 16:02		Jan-16-19 16:21		Jan-16-19 16:42		Jan-16-19 17:02		** ** ** **	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 611129

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id: 2RP-2900
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611129-019		611129-020		611129-021		611129-022					
	Field Id:	PH10		PH10A		PH11		PH11A					
	Depth:	2- ft		4- ft		2- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-07-19 15:30		Jan-07-19 15:35		Jan-07-19 15:50		Jan-07-19 15:55					
BTEX by EPA 8021B	***Extracted:***	Jan-15-19 16:30		Jan-15-19 16:30		Jan-15-19 16:30		Jan-15-19 16:30					
	Analyzed:	Jan-16-19 01:24		Jan-16-19 02:38		Jan-16-19 02:57		Jan-16-19 03:16					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00400	0.00400	<0.00399	0.00399				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00		Jan-16-19 09:00					
	Analyzed:	Jan-16-19 17:14		Jan-16-19 17:21		Jan-16-19 17:27		Jan-16-19 17:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		25.1	4.99	<4.96	4.96	47.8	4.95	<4.99	4.99				
TPH by SW8015 Mod	***Extracted:***	Jan-17-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00					
	Analyzed:	Jan-17-19 12:08		Jan-17-19 12:28		Jan-17-19 13:04		Jan-17-19 13:23					
	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)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-001	Date Collected:	01.07.19 09.15	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 08.00	Basis:	Wet Weight
Seq Number:	3076058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.6**	4.98	mg/kg	01.16.19 13.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 10.00	Basis:	Wet Weight
Seq Number:	3075858				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.15.19 21.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.15.19 21.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.15.19 21.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.15.19 21.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	01.15.19 21.51	
o-Terphenyl	84-15-1	132	%	70-135	01.15.19 21.51	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-001	Date Collected:	01.07.19 09.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.15.19 14.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 14.05	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.15.19 14.05	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-002	Date Collected:	01.07.19 09.20	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 08.00	Basis:	Wet Weight
Seq Number:	3076058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**566**	4.98	mg/kg	01.16.19 13.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 10.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**15.5**	15.0	mg/kg	01.16.19 10.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 10.45	U	1
Total TPH	PHC635	**15.5**	15.0	mg/kg	01.16.19 10.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.16.19 10.45	
o-Terphenyl	84-15-1	86	%	70-135	01.16.19 10.45	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-002	Date Collected:	01.07.19 09.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.15.19 14.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 14.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 14.24	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 14.24	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-003	Date Collected:	01.07.19 10.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 08.00	Basis:	Wet Weight
Seq Number:	3076058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2940**	25.0	mg/kg	01.16.19 13.58		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 11.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 11.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 11.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 11.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.16.19 11.05	
o-Terphenyl	84-15-1	89	%	70-135	01.16.19 11.05	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-003	Date Collected:	01.07.19 10.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.15.19 14.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.15.19 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.19 14.43	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 14.43	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-004	Date Collected:	01.07.19 10.25	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 08.00	Basis:	Wet Weight
Seq Number:	3076058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.5**	4.99	mg/kg	01.16.19 14.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 12.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 12.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 12.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 12.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.16.19 12.04	
o-Terphenyl	84-15-1	88	%	70-135	01.16.19 12.04	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-004	Date Collected:	01.07.19 10.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.15.19 23.49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.15.19 23.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 23.49	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 23.49	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-005	Date Collected:	01.07.19 11.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 08.00	Basis:	Wet Weight
Seq Number:	3076058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**379**	4.99	mg/kg	01.16.19 14.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 12.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 12.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 12.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 12.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.16.19 12.24	
o-Terphenyl	84-15-1	87	%	70-135	01.16.19 12.24	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-005	Date Collected:	01.07.19 11.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.15.19 16.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.15.19 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.15.19 16.54	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.15.19 16.54	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH03A** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-006 Date Collected: 01.07.19 11.20 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**487**	5.00	mg/kg	01.16.19 14.50		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 12.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 12.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 12.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 12.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.16.19 12.43	
o-Terphenyl	84-15-1	87	%	70-135	01.16.19 12.43	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-006	Date Collected:	01.07.19 11.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.15.19 17.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.15.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.19 17.13	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.15.19 17.13	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-007	Date Collected:	01.07.19 12.35	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**534**	4.99	mg/kg	01.16.19 15.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 13.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 13.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 13.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 13.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	01.16.19 13.03	
o-Terphenyl	84-15-1	83	%	70-135	01.16.19 13.03	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-007	Date Collected:	01.07.19 12.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.15.19 17.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.15.19 17.32	
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.15.19 17.32	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-008	Date Collected:	01.07.19 12.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**94.3**	4.95	mg/kg	01.16.19 15.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 14.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 14.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 14.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 14.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.16.19 14.03	
o-Terphenyl	84-15-1	85	%	70-135	01.16.19 14.03	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-008	Date Collected:	01.07.19 12.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.15.19 17.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 17.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.19 17.51	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 17.51	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH05** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-009 Date Collected: 01.07.19 13.05 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**298**	4.95	mg/kg	01.16.19 15.21		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 14.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 14.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 14.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.16.19 14.23	
o-Terphenyl	84-15-1	86	%	70-135	01.16.19 14.23	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-009	Date Collected:	01.07.19 13.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.15.19 18.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.15.19 18.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.15.19 18.10	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.15.19 18.10	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH05A** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-010 Date Collected: 01.07.19 13.10 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**295**	4.99	mg/kg	01.16.19 15.27		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 14.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 14.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 14.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.16.19 14.43	
o-Terphenyl	84-15-1	87	%	70-135	01.16.19 14.43	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-010	Date Collected:	01.07.19 13.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.15.19 18.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 18.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.15.19 18.29	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 18.29	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-011	Date Collected:	01.07.19 13.50	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**437**	4.99	mg/kg	01.16.19 15.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 15.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 15.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 15.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 15.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.16.19 15.03	
o-Terphenyl	84-15-1	84	%	70-135	01.16.19 15.03	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-011	Date Collected:	01.07.19 13.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.15.19 18.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 18.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 18.48	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.19 18.48	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH06A** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-012 Date Collected: 01.07.19 13.55 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**352**	4.99	mg/kg	01.16.19 15.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 15.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 15.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 15.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 15.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.16.19 15.22	
o-Terphenyl	84-15-1	89	%	70-135	01.16.19 15.22	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-012	Date Collected:	01.07.19 13.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.15.19 19.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.15.19 19.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.19 19.07	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 19.07	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH07** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-013 Date Collected: 01.07.19 14.10 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**208**	4.95	mg/kg	01.16.19 16.01		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 15.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 15.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 15.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 15.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.16.19 15.42	
o-Terphenyl	84-15-1	88	%	70-135	01.16.19 15.42	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-013	Date Collected:	01.07.19 14.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.15.19 19.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.15.19 19.26	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.19 19.26	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-014	Date Collected:	01.07.19 14.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**144**	4.99	mg/kg	01.16.19 16.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 17.00	Basis:	Wet Weight
Seq Number:	3075975				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 16.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 16.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 16.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.16.19 16.02	
o-Terphenyl	84-15-1	87	%	70-135	01.16.19 16.02	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-014	Date Collected:	01.07.19 14.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.15.19 19.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.15.19 19.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.15.19 19.45	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.15.19 19.45	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH08** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-015 Date Collected: 01.07.19 14.40 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.8**	5.00	mg/kg	01.16.19 16.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 16.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 16.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 16.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.16.19 16.21	
o-Terphenyl	84-15-1	85	%	70-135	01.16.19 16.21	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-015	Date Collected:	01.07.19 14.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.16.19 00.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 00.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.16.19 00.08	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.16.19 00.08	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH08A** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-016 Date Collected: 01.07.19 14.45 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.39**	4.96	mg/kg	01.16.19 16.28		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 16.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 16.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 16.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 16.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	01.16.19 16.42	
o-Terphenyl	84-15-1	85	%	70-135	01.16.19 16.42	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-016	Date Collected:	01.07.19 14.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.19 00.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.19 00.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.16.19 00.27	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.16.19 00.27	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH09** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-017 Date Collected: 01.07.19 15.05 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.3**	4.99	mg/kg	01.16.19 16.47		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.15.19 17.00 Basis: Wet Weight

Seq Number: 3075975

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.16.19 17.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.16.19 17.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.16.19 17.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.16.19 17.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.16.19 17.02	
o-Terphenyl	84-15-1	86	%	70-135	01.16.19 17.02	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-017	Date Collected:	01.07.19 15.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.16.19 00.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 00.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.16.19 00.46	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.16.19 00.46	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-018	Date Collected:	01.07.19 15.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.9**	4.98	mg/kg	01.16.19 16.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.19 09.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.19 09.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.17.19 09.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.19 09.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.17.19 09.24	
o-Terphenyl	84-15-1	96	%	70-135	01.17.19 09.24	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-018	Date Collected:	01.07.19 15.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.16.19 01.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 01.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.16.19 01.05	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.16.19 01.05	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-019	Date Collected:	01.07.19 15.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.1**	4.99	mg/kg	01.16.19 17.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.19 12.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.19 12.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.17.19 12.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.19 12.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.17.19 12.08	
o-Terphenyl	84-15-1	92	%	70-135	01.17.19 12.08	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-019	Date Collected:	01.07.19 15.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.16.19 01.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.16.19 01.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.16.19 01.24	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.16.19 01.24	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-020	Date Collected:	01.07.19 15.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.16.19 17.21	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.19 12.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.19 12.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.17.19 12.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.19 12.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.17.19 12.28	
o-Terphenyl	84-15-1	100	%	70-135	01.17.19 12.28	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-020	Date Collected:	01.07.19 15.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.16.19 02.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 02.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.16.19 02.38	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.16.19 02.38	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id: **PH11** Matrix: Soil Date Received:01.11.19 13.15

Lab Sample Id: 611129-021 Date Collected: 01.07.19 15.50 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 01.16.19 09.00 Basis: Wet Weight

Seq Number: 3076062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.8**	4.95	mg/kg	01.16.19 17.27		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 01.17.19 10.00 Basis: Wet Weight

Seq Number: 3076411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.19 13.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.19 13.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.17.19 13.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.19 13.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.17.19 13.04	
o-Terphenyl	84-15-1	99	%	70-135	01.17.19 13.04	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-021	Date Collected:	01.07.19 15.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.16.19 02.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 02.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.16.19 02.57	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.16.19 02.57	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-022	Date Collected:	01.07.19 15.55	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.16.19 09.00	Basis:	Wet Weight
Seq Number:	3076062				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.16.19 17.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.19 13.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.19 13.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.17.19 13.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.19 13.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.17.19 13.23	
o-Terphenyl	84-15-1	104	%	70-135	01.17.19 13.23	

Certificate of Analytical Results 611129

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611129-022	Date Collected:	01.07.19 15.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 16.30	Basis:	Wet Weight
Seq Number:	3075983				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.16.19 03.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 03.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.16.19 03.16	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.16.19 03.16	

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 611129

LT Environmental, Inc.

PLU 301 H

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3076058 — Matrix: Solid — Date Prep: 01.16.19
MB Sample Id: 7669800-1-BLK — LCS Sample Id: 7669800-1-BKS — LCSD Sample Id: 7669800-1-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	245	98	257	103	90-110	5	20	mg/kg	01.16.19 11:05	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3076062 — Matrix: Solid — Date Prep: 01.16.19
MB Sample Id: 7669801-1-BLK — LCS Sample Id: 7669801-1-BKS — LCSD Sample Id: 7669801-1-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	258	103	256	102	90-110	1	20	mg/kg	01.16.19 14:38	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3076058 — Matrix: Soil — Date Prep: 01.16.19
Parent Sample Id: 611080-002 — MS Sample Id: 611080-002 S — MSD Sample Id: 611080-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	451	250	632	72	660	84	90-110	4	20	mg/kg	01.16.19 11:23	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3076058 — Matrix: Soil — Date Prep: 01.16.19
Parent Sample Id: 611087-010 — MS Sample Id: 611087-010 S — MSD Sample Id: 611087-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	150	250	363	85	374	90	90-110	3	20	mg/kg	01.16.19 12:53	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3076062 — Matrix: Soil — Date Prep: 01.16.19
Parent Sample Id: 611129-006 — MS Sample Id: 611129-006 S — MSD Sample Id: 611129-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	487	250	734	99	759	109	90-110	3	20	mg/kg	01.16.19 14:56	

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 611129

LT Environmental, Inc.

PLU 301 H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076062 Matrix: Soil Date Prep: 01.16.19
Parent Sample Id: 611129-016 MS Sample Id: 611129-016 S MSD Sample Id: 611129-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.39	248	249	97	272	106	90-110	9	20	mg/kg	01.16.19 16:34	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075858 Matrix: Solid Date Prep: 01.15.19
MB Sample Id: 7669780-1-BLK LCS Sample Id: 7669780-1-BKS LCSD Sample Id: 7669780-1-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	701	70	771	77	70-135	10	20	mg/kg	01.15.19 12:50	
Diesel Range Organics (DRO)	<8.13	1000	804	80	902	90	70-135	11	20	mg/kg	01.15.19 12:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		98		109		70-135	%	01.15.19 12:50
o-Terphenyl	112		94		105		70-135	%	01.15.19 12:50

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075975 Matrix: Solid Date Prep: 01.15.19
MB Sample Id: 7669854-1-BLK LCS Sample Id: 7669854-1-BKS LCSD Sample Id: 7669854-1-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	770	77	859	86	70-135	11	20	mg/kg	01.15.19 23:52	
Diesel Range Organics (DRO)	<8.13	1000	903	90	1010	101	70-135	11	20	mg/kg	01.15.19 23:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		109		127		70-135	%	01.15.19 23:52
o-Terphenyl	118		87		128		70-135	%	01.15.19 23:52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076411 Matrix: Solid Date Prep: 01.17.19
MB Sample Id: 7670004-1-BLK LCS Sample Id: 7670004-1-BKS LCSD Sample Id: 7670004-1-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	1140	114	1110	111	70-135	3	20	mg/kg	01.17.19 08:45	
Diesel Range Organics (DRO)	<8.13	1000	1230	123	1270	127	70-135	3	20	mg/kg	01.17.19 08:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	139	**	148	**	143	**	70-135	%	01.17.19 08:45
o-Terphenyl	144	**	131		128		70-135	%	01.17.19 08:45

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 611129

LT Environmental, Inc.

PLU 301 H

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3075858 — Matrix: Soil — Date Prep: 01.15.19
Parent Sample Id: 610951-001 — MS Sample Id: 610951-001 S — MSD Sample Id: 610951-001 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)	<8.00	1000	2130	213	2100	210	70-135	1	20	mg/kg	01.15.19 14:53	X
Diesel Range Organics (DRO)	<8.13	1000	2320	232	2300	230	70-135	1	20	mg/kg	01.15.19 14:53	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	197	**	197	**	70-135	%	01.15.19 14:53
o-Terphenyl	202	**	196	**	70-135	%	01.15.19 14:53

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3075975 — Matrix: Soil — Date Prep: 01.15.19
Parent Sample Id: 611325-001 — MS Sample Id: 611325-001 S — MSD Sample Id: 611325-001 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)	<8.00	1000	741	74	735	74	70-135	1	20	mg/kg	01.16.19 09:07	
Diesel Range Organics (DRO)	12.8	1000	815	80	808	80	70-135	1	20	mg/kg	01.16.19 09:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		106		70-135	%	01.16.19 09:07
o-Terphenyl	102		102		70-135	%	01.16.19 09:07

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076411 — Matrix: Soil — Date Prep: 01.17.19
Parent Sample Id: 611129-018 — MS Sample Id: 611129-018 S — MSD Sample Id: 611129-018 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)	<8.00	1000	823	82	814	81	70-135	1	20	mg/kg	01.17.19 09:44	
Diesel Range Organics (DRO)	<8.13	1000	908	91	906	91	70-135	0	20	mg/kg	01.17.19 09:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		122		70-135	%	01.17.19 09:44
o-Terphenyl	120		100		70-135	%	01.17.19 09:44

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 611129

LT Environmental, Inc.

PLU 301 H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3075844 | Matrix: Solid | Date Prep: 01.15.19
MB Sample Id: 7669773-1-BLK | LCS Sample Id: 7669773-1-BKS | LCSD Sample Id: 7669773-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0978	98	0.106	106	70-130	8	35	mg/kg	01.15.19 10:19	
Toluene	<0.000455	0.0998	0.0953	95	0.102	102	70-130	7	35	mg/kg	01.15.19 10:19	
Ethylbenzene	<0.000564	0.0998	0.0931	93	0.0996	100	70-130	7	35	mg/kg	01.15.19 10:19	
m,p-Xylenes	<0.00399	0.200	0.185	93	0.197	99	70-130	6	35	mg/kg	01.15.19 10:19	
o-Xylene	<0.000344	0.0998	0.0918	92	0.0982	98	70-130	7	35	mg/kg	01.15.19 10:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		103		70-130	%	01.15.19 10:19
4-Bromofluorobenzene	81		97		95		70-130	%	01.15.19 10:19

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3075983 | Matrix: Solid | Date Prep: 01.15.19
MB Sample Id: 7669856-1-BLK | LCS Sample Id: 7669856-1-BKS | LCSD Sample Id: 7669856-1-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	0.102	102	0.102	102	70-130	0	35	mg/kg	01.15.19 20:41	
Toluene	<0.000454	0.0996	0.0972	98	0.0971	97	70-130	0	35	mg/kg	01.15.19 20:41	
Ethylbenzene	<0.000563	0.0996	0.0943	95	0.0939	94	70-130	0	35	mg/kg	01.15.19 20:41	
m,p-Xylenes	<0.00101	0.199	0.186	93	0.185	93	70-130	1	35	mg/kg	01.15.19 20:41	
o-Xylene	<0.000343	0.0996	0.0944	95	0.0938	94	70-130	1	35	mg/kg	01.15.19 20:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		103		70-130	%	01.15.19 20:41
4-Bromofluorobenzene	83		91		94		70-130	%	01.15.19 20:41

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3075844 | Matrix: Soil | Date Prep: 01.15.19
Parent Sample Id: 611282-001 | MS Sample Id: 611282-001 S | MSD Sample Id: 611282-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000428	0.0996	0.0915	91	0.0860	86	70-130	6	35	mg/kg	01.15.19 10:57	
Toluene	<0.000454	0.0996	0.0898	90	0.0819	82	70-130	9	35	mg/kg	01.15.19 10:57	
Ethylbenzene	<0.000563	0.0996	0.0835	84	0.0728	73	70-130	14	35	mg/kg	01.15.19 10:57	
m,p-Xylenes	0.00172	0.199	0.166	83	0.143	71	70-130	15	35	mg/kg	01.15.19 10:57	
o-Xylene	<0.000343	0.0996	0.0825	83	0.0720	72	70-130	14	35	mg/kg	01.15.19 10:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.15.19 10:57
4-Bromofluorobenzene	98		95		70-130	%	01.15.19 10:57

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 611129

LT Environmental, Inc.

PLU 301 H

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

Seq Number: 3075983 Matrix: Soil Date Prep: 01.15.19

Parent Sample Id: 611129-022 MS Sample Id: 611129-022 S MSD Sample Id: 611129-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0926	92	0.0878	88	70-130	5	35	mg/kg	01.15.19 21:19	
Toluene	<0.000459	0.101	0.0894	89	0.0852	85	70-130	5	35	mg/kg	01.15.19 21:19	
Ethylbenzene	<0.000569	0.101	0.0861	85	0.0821	82	70-130	5	35	mg/kg	01.15.19 21:19	
m,p-Xylenes	<0.00102	0.202	0.170	84	0.162	81	70-130	5	35	mg/kg	01.15.19 21:19	
o-Xylene	<0.000347	0.101	0.0869	86	0.0830	83	70-130	5	35	mg/kg	01.15.19 21:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	01.15.19 21:19
4-Bromofluorobenzene	94		95		70-130	%	01.15.19 21:19

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: 611129

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
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178 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 301H	Turn Around	
Project Number:	2RP-2900	Routine	✓
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 0.2	Thermometer ID	VE
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	1-7-19	0915	2'	1	X	X	X
PH01A			0920	4'		X	X	X
PH02			1010	2'		X	X	X
PH02A			1025	4'		X	X	X
PH03			1110	2'		X	X	X
PH03A			1120	4'		X	X	X
PH04			1235	2'		X	X	X
PH04A			1240	4'		X	X	X
PH05			1305	2'		X	X	X
PH05A			1310	4'		X	X	X

Work Order Notes

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

Sample Comments

Discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1-9-19 @ 1700	2		1/11/19 1315
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

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

Work Order No: 601129

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:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
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 ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 301H	Turn Around	
Project Number:	ZRP-2900	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 / 0.2	Thermometer ID	BE	
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)
PH06	S	1-7-19	1350	2'	1	X	X	X
PH06A			1355	4'		X	X	X
PH07			1410	2'		X	X	X
PH07A			1415	4'		X	X	X
PH08			1440	2'		X	X	X
PH08A			1445	4'		X	X	X
PH09			1505	2'		X	X	X
PH09A			1510	4'		X	X	X
PH10			1530	2'		X	X	X
PH10A	↓	↓	1535	4'	↓	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	[signature]	1-9-19@1700	2 [signature]	[signature]	1/11/19 1315
3				4		
5				6		

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 611129

www.xenco.com Page 3 of 3

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:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
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 ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 301H
Project Number:	2RP-2900
P.O. Number:	
Sampler's Name:	Benjamin Belill

Turn Around
Routine ☑
Rush:
Due Date:

SAMPLE RECEIPT

Temperature (°C):	0.5/0.2	Temp Blank:	Yes (No)
Received Intact:	(Yes) No	Wet Ice:	(Yes) No
Cooler Custody Seals:	Yes (No) N/A	Thermometer ID:	Yes
Sample Custody Seals:	Yes No N/A	Correction Factor:	-0.1
		Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH11	S	1-7-19	1550	2'	1	X	X	X
PH11A	S	1-7-19	1555	4'	1	X	X	X

Work Order Notes

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

Sample Comments

Discrete
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			1/9/19 @ 1700	2		1/11/19 1345
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: 01/11/2019 01:15:00 PM

Work Order #: 611129

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 01/11/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/11/2019
Jessica Kramer

Analytical Report 627518

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 301 H

19-JUN-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)

19-JUN-19

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

Reference: XENCO Report No(s): **627518**
PLU 301 H
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 627518. 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. 627518 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 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	06-07-19 13:45	5 ft	627518-001
FS02	S	06-07-19 13:50	5 ft	627518-002
FS03	S	06-07-19 13:55	6 ft	627518-003
FS04	S	06-07-19 14:00	6 ft	627518-004
FS05	S	06-07-19 14:05	5 ft	627518-005
FS06	S	06-07-19 14:10	5 ft	627518-006
FS07	S	06-07-19 14:15	3 ft	627518-007
FS08	S	06-07-19 14:20	3 ft	627518-008
FS09	S	06-07-19 14:25	3 ft	627518-009

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 301 H

Project ID:
Work Order Number(s): *627518*

Report Date: *19-JUN-19*
Date Received: *06/13/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092433 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Samples affected are: 7680002-1-BKS.

Batch: LBA-3092691 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3092736 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 627518

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-13-19 11:20 am
Report Date: 19-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	627518-001		627518-002		627518-003		627518-004		627518-005		627518-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	5- ft		5- ft		6- ft		6- ft		5- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-07-19 13:45		Jun-07-19 13:50		Jun-07-19 13:55		Jun-07-19 14:00		Jun-07-19 14:05		Jun-07-19 14:10	
BTEX by EPA 8021B	***Extracted:***	Jun-14-19 14:00		Jun-14-19 14:00		Jun-17-19 11:00		Jun-14-19 14:00		Jun-14-19 14:00		Jun-14-19 14:00	
	Analyzed:	Jun-18-19 11:27		Jun-18-19 11:47		Jun-18-19 07:34		Jun-18-19 12:07		Jun-18-19 12:27		Jun-18-19 12:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00397	0.00397	<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 15:45	
	Analyzed:	Jun-14-19 01:32		Jun-14-19 01:39		Jun-14-19 02:01		Jun-14-19 02:08		Jun-14-19 02:30		Jun-14-19 02:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		319	5.03	175	4.96	<5.00	5.00	256	5.04	481	4.99	423	4.97
TPH by SW8015 Mod	***Extracted:***	Jun-14-19 07:00		Jun-14-19 07:00		Jun-14-19 07:00		Jun-14-19 07:00		Jun-14-19 07:00		Jun-14-19 07:00	
	Analyzed:	Jun-14-19 20:45		Jun-14-19 21:11		Jun-14-19 21:36		Jun-14-19 22:00		Jun-14-19 22:25		Jun-14-19 22:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<14.9	14.9	<15.0	15.0	<15.0	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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 627518

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-13-19 11:20 am
Report Date: 19-JUN-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	627518-007		627518-008		627518-009					
	Field Id:	FS07		FS08		FS09					
	Depth:	3- ft		3- ft		3- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-07-19 14:15		Jun-07-19 14:20		Jun-07-19 14:25					
BTEX by EPA 8021B	***Extracted:***	Jun-14-19 14:00		Jun-17-19 11:00		Jun-17-19 11:00					
	Analyzed:	Jun-18-19 13:07		Jun-18-19 07:56		Jun-18-19 08:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 15:45					
	Analyzed:	Jun-14-19 02:45		Jun-14-19 02:52		Jun-14-19 02:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		209	5.01	183	4.98	185	4.96				
TPH by SW8015 Mod	***Extracted:***	Jun-14-19 07:00		Jun-14-19 07:00		Jun-14-19 07:00					
	Analyzed:	Jun-14-19 23:14		Jun-14-19 23:39		Jun-15-19 00:04					
	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)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-001	Date Collected:	06.07.19 13.45	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**319**	5.03	mg/kg	06.14.19 01.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.14.19 20.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.14.19 20.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.14.19 20.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.14.19 20.45	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.14.19 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	06.14.19 20.45	
o-Terphenyl	84-15-1	73	%	70-135	06.14.19 20.45	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-001	Date Collected:	06.07.19 13.45	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.18.19 11.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.18.19 11.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.18.19 11.27	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.18.19 11.27	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-002	Date Collected:	06.07.19 13.50	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**175**	4.96	mg/kg	06.14.19 01.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 21.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 21.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 21.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 21.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 21.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	06.14.19 21.11	
o-Terphenyl	84-15-1	70	%	70-135	06.14.19 21.11	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-002	Date Collected:	06.07.19 13.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.18.19 11.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.18.19 11.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.18.19 11.47	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.18.19 11.47	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-003	Date Collected:	06.07.19 13.55	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	06.14.19 02.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 21.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 21.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 21.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 21.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.14.19 21.36	
o-Terphenyl	84-15-1	79	%	70-135	06.14.19 21.36	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-003	Date Collected:	06.07.19 13.55	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.18.19 07.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.18.19 07.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.18.19 07.34	
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.18.19 07.34	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-004	Date Collected:	06.07.19 14.00	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**256**	5.04	mg/kg	06.14.19 02.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 22.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 22.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 22.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 22.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 22.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	06.14.19 22.00	
o-Terphenyl	84-15-1	71	%	70-135	06.14.19 22.00	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-004	Date Collected:	06.07.19 14.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.18.19 12.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.18.19 12.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.18.19 12.07	
1,4-Difluorobenzene	540-36-3	105	%	70-130	06.18.19 12.07	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-005	Date Collected:	06.07.19 14.05	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**481**	4.99	mg/kg	06.14.19 02.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 22.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 22.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 22.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 22.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 22.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	06.14.19 22.25	
o-Terphenyl	84-15-1	75	%	70-135	06.14.19 22.25	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-005	Date Collected:	06.07.19 14.05	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.18.19 12.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.18.19 12.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.18.19 12.27	
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.18.19 12.27	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-006	Date Collected:	06.07.19 14.10	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**423**	4.97	mg/kg	06.14.19 02.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 22.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 22.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 22.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.14.19 22.50	
o-Terphenyl	84-15-1	77	%	70-135	06.14.19 22.50	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-006	Date Collected:	06.07.19 14.10	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.18.19 12.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.18.19 12.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.18.19 12.47	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.18.19 12.47	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-007	Date Collected:	06.07.19 14.15	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**209**	5.01	mg/kg	06.14.19 02.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 23.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 23.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 23.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 23.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.14.19 23.14	
o-Terphenyl	84-15-1	73	%	70-135	06.14.19 23.14	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-007	Date Collected:	06.07.19 14.15	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 14.00	Basis:	Wet Weight
Seq Number:	3092736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.18.19 13.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.18.19 13.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.18.19 13.07	
1,4-Difluorobenzene	540-36-3	105	%	70-130	06.18.19 13.07	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-008	Date Collected:	06.07.19 14.20	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**183**	4.98	mg/kg	06.14.19 02.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 23.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 23.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 23.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 23.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 23.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	06.14.19 23.39	
o-Terphenyl	84-15-1	76	%	70-135	06.14.19 23.39	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-008	Date Collected:	06.07.19 14.20	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.18.19 07.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.18.19 07.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.18.19 07.56	
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.18.19 07.56	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-009	Date Collected:	06.07.19 14.25	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**185**	4.96	mg/kg	06.14.19 02.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.15.19 00.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.15.19 00.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.15.19 00.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.15.19 00.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.15.19 00.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	06.15.19 00.04	
o-Terphenyl	84-15-1	86	%	70-135	06.15.19 00.04	

Certificate of Analytical Results 627518

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627518-009	Date Collected:	06.07.19 14.25	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.18.19 08.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.18.19 08.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.18.19 08.18	
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.18.19 08.18	

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 627518

LT Environmental, Inc.

PLU 301 H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092271 Matrix: Solid Date Prep: 06.13.19
MB Sample Id: 7679884-1-BLK LCS Sample Id: 7679884-1-BKS LCSD Sample Id: 7679884-1-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	243	97	242	97	90-110	0	20	mg/kg	06.13.19 23:43	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092271 Matrix: Soil Date Prep: 06.13.19
Parent Sample Id: 627517-011 MS Sample Id: 627517-011 S MSD Sample Id: 627517-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.54	250	252	97	251	97	90-110	0	20	mg/kg	06.14.19 00:05	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092271 Matrix: Soil Date Prep: 06.13.19
Parent Sample Id: 627518-002 MS Sample Id: 627518-002 S MSD Sample Id: 627518-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	175	248	413	96	412	96	90-110	0	20	mg/kg	06.14.19 01:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092433 Matrix: Solid Date Prep: 06.14.19
MB Sample Id: 7680002-1-BLK LCS Sample Id: 7680002-1-BKS LCSD Sample Id: 7680002-1-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	1140	114	1070	107	70-135	6	20	mg/kg	06.14.19 14:08	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	1040	104	70-135	13	20	mg/kg	06.14.19 14:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		128		100		70-135	%	06.14.19 14:08
o-Terphenyl	94		136	**	105		70-135	%	06.14.19 14:08

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 627518

LT Environmental, Inc.

PLU 301 H

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3092433 | Matrix: Soil | Date Prep: 06.14.19
Parent Sample Id: 627521-001 | MS Sample Id: 627521-001 S | MSD Sample Id: 627521-001 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)	14.7	999	954	94	916	90	70-135	4	20	mg/kg	06.14.19 15:24	
Diesel Range Organics (DRO)	9.77	999	922	91	953	95	70-135	3	20	mg/kg	06.14.19 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		89		70-135	%	06.14.19 15:24
o-Terphenyl	77		94		70-135	%	06.14.19 15:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3092736 | Matrix: Solid | Date Prep: 06.14.19
MB Sample Id: 7680039-1-BLK | LCS Sample Id: 7680039-1-BKS | LCSD Sample Id: 7680039-1-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	0.0743	74	0.0838	84	70-130	12	35	mg/kg	06.18.19 05:06	
Toluene	<0.000455	0.0998	0.0765	77	0.0843	84	70-130	10	35	mg/kg	06.18.19 05:06	
Ethylbenzene	<0.000564	0.0998	0.0883	88	0.0964	96	70-130	9	35	mg/kg	06.18.19 05:06	
m,p-Xylenes	<0.00101	0.200	0.177	89	0.192	96	70-130	8	35	mg/kg	06.18.19 05:06	
o-Xylene	<0.00200	0.0998	0.0850	85	0.0924	92	70-130	8	35	mg/kg	06.18.19 05:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		95		96		70-130	%	06.18.19 05:06
4-Bromofluorobenzene	110		106		103		70-130	%	06.18.19 05:06

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3092691 | Matrix: Solid | Date Prep: 06.17.19
MB Sample Id: 7680033-1-BLK | LCS Sample Id: 7680033-1-BKS | LCSD Sample Id: 7680033-1-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	0.0937	94	0.0968	97	70-130	3	35	mg/kg	06.18.19 04:56	
Toluene	<0.00200	0.100	0.0860	86	0.0893	90	70-130	4	35	mg/kg	06.18.19 04:56	
Ethylbenzene	<0.00200	0.100	0.0933	93	0.0973	98	70-130	4	35	mg/kg	06.18.19 04:56	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.194	97	70-130	4	35	mg/kg	06.18.19 04:56	
o-Xylene	<0.00200	0.100	0.0909	91	0.0940	95	70-130	3	35	mg/kg	06.18.19 04:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		108		70-130	%	06.18.19 04:56
4-Bromofluorobenzene	91		101		105		70-130	%	06.18.19 04:56

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

Final 1.000

QC Summary 627518

LT Environmental, Inc.

PLU 301 H

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

Seq Number: 3092736 Matrix: Soil Date Prep: 06.14.19

Parent Sample Id: 627205-007 MS Sample Id: 627205-007 S MSD Sample Id: 627205-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0813	80	0.0862	86	70-130	6	35	mg/kg	06.18.19 05:46	
Toluene	<0.00201	0.101	0.0826	82	0.0840	84	70-130	2	35	mg/kg	06.18.19 05:46	
Ethylbenzene	<0.00201	0.101	0.0942	93	0.0944	94	70-130	0	35	mg/kg	06.18.19 05:46	
m,p-Xylenes	<0.00102	0.201	0.189	94	0.188	94	70-130	1	35	mg/kg	06.18.19 05:46	
o-Xylene	<0.00201	0.101	0.0921	91	0.0911	91	70-130	1	35	mg/kg	06.18.19 05:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		98		70-130	%	06.18.19 05:46
4-Bromofluorobenzene	110		104		70-130	%	06.18.19 05:46

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

Seq Number: 3092691 Matrix: Soil Date Prep: 06.17.19

Parent Sample Id: 627518-003 MS Sample Id: 627518-003 S MSD Sample Id: 627518-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.101	101	0.0980	98	70-130	3	35	mg/kg	06.18.19 05:40	
Toluene	<0.00201	0.100	0.0931	93	0.0907	91	70-130	3	35	mg/kg	06.18.19 05:40	
Ethylbenzene	<0.00201	0.100	0.0997	100	0.0973	97	70-130	2	35	mg/kg	06.18.19 05:40	
m,p-Xylenes	<0.00402	0.201	0.198	99	0.192	96	70-130	3	35	mg/kg	06.18.19 05:40	
o-Xylene	<0.00201	0.100	0.0957	96	0.0938	94	70-130	2	35	mg/kg	06.18.19 05:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	06.18.19 05:40
4-Bromofluorobenzene	103		104		70-130	%	06.18.19 05:40

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

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

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

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 627518

www.xenco.com Page 1 of 1

Project Manager:	DAN MOIR	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental Inc	Company Name:	XTO - Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(432) 704-5178	Email:	dmoir@ltenv.com rdmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 301 H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-2900	Rush: 3 Day	
Sampler's Name:	Robert M.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4/0.4	Thermometer ID:	126
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
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	06/07/19	1345	5'	1	X	X	X
FS02			1350	5'		X	X	X
FS03			1355	6'		X	X	X
FS04			1400	6'		X	X	X
FS05			1405	5'		X	X	X
FS06			1410	5'		X	X	X
FS07			1415	3'		X	X	X
FS08			1420	3'		X	X	X
FS09			1425	3'		X	X	X

Work Order Notes

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

Sample Comments

composite

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 Robert McAfee	Courtney	6/11/19 16:15	2	Raul	6/13/19 11:20
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/13/2019 11:20:00 AM

Work Order #: 627518

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: 06/13/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/13/2019
Jessica Kramer

Analytical Report 627519

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 301 H

19-JUN-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)

19-JUN-19

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

Reference: XENCO Report No(s): **627519**
PLU 301 H
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 627519. 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. 627519 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 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	06-07-19 13:30	0 - 5 ft	627519-001
SW02	S	06-07-19 13:35	0 - 5 ft	627519-002
SW03	S	06-07-19 13:40	0 - 5 ft	627519-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 301 H

Project ID:
Work Order Number(s): *627519*

Report Date: *19-JUN-19*
Date Received: *06/13/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092273 Chloride by EPA 300
Lab Sample ID 627519-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 627519-003.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3092433 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Samples affected are: 7680002-1-BKS.

Batch: LBA-3092691 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 627519

LT Environmental, Inc., Arvada, CO

Project Name: PLU 301 H

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jun-13-19 11:20 am
Report Date: 19-JUN-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	627519-001		627519-002		627519-003					
	Field Id:	SW01		SW02		SW03					
	Depth:	0-5 ft		0-5 ft		0-5 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-07-19 13:30		Jun-07-19 13:35		Jun-07-19 13:40					
BTEX by EPA 8021B	***Extracted:***	Jun-17-19 11:00		Jun-17-19 11:00		Jun-17-19 11:00					
	Analyzed:	Jun-18-19 08:40		Jun-18-19 09:02		Jun-18-19 09:24					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00402	0.00402	<0.00400	0.00400	<0.00398	0.00398				
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	Jun-13-19 15:45		Jun-13-19 15:45		Jun-13-19 16:30					
	Analyzed:	Jun-14-19 03:07		Jun-14-19 03:14		Jun-13-19 17:51					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		613	4.95	501	4.95	938	5.00				
TPH by SW8015 Mod	***Extracted:***	Jun-13-19 15:00		Jun-13-19 15:00		Jun-14-19 07:00					
	Analyzed:	Jun-14-19 09:38		Jun-14-19 10:03		Jun-15-19 00:28					
	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)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-001	Date Collected:	06.07.19 13.30	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**613**	4.95	mg/kg	06.14.19 03.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.13.19 15.00	Basis:	Wet Weight
Seq Number:	3092270				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 09.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 09.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 09.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 09.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 09.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.14.19 09.38	
o-Terphenyl	84-15-1	108	%	70-135	06.14.19 09.38	

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-001	Date Collected:	06.07.19 13.30	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.18.19 08.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.18.19 08.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	06.18.19 08.40	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.18.19 08.40	

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-002	Date Collected:	06.07.19 13.35	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 15.45	Basis:	Wet Weight
Seq Number:	3092271				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**501**	4.95	mg/kg	06.14.19 03.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.13.19 15.00	Basis:	Wet Weight
Seq Number:	3092270				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.14.19 10.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.14.19 10.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.14.19 10.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.14.19 10.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.14.19 10.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	06.14.19 10.03	
o-Terphenyl	84-15-1	96	%	70-135	06.14.19 10.03	

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-002	Date Collected:	06.07.19 13.35	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.18.19 09.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.18.19 09.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.18.19 09.02	
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.18.19 09.02	

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-003	Date Collected:	06.07.19 13.40	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.13.19 16.30	Basis:	Wet Weight
Seq Number:	3092273				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**938**	5.00	mg/kg	06.13.19 17.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.14.19 07.00	Basis:	Wet Weight
Seq Number:	3092433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.15.19 00.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.15.19 00.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.15.19 00.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.15.19 00.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.15.19 00.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	06.15.19 00.28	
o-Terphenyl	84-15-1	77	%	70-135	06.15.19 00.28	

Certificate of Analytical Results 627519

LT Environmental, Inc., Arvada, CO

PLU 301 H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	06.13.19 11.20
Lab Sample Id:	627519-003	Date Collected:	06.07.19 13.40	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.17.19 11.00	Basis:	Wet Weight
Seq Number:	3092691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.18.19 09.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.18.19 09.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.18.19 09.24	
1,4-Difluorobenzene	540-36-3	114	%	70-130	06.18.19 09.24	

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 627519

LT Environmental, Inc.

PLU 301 H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092271 — Matrix: Solid — Date Prep: 06.13.19
MB Sample Id: 7679884-1-BLK — LCS Sample Id: 7679884-1-BKS — LCSD Sample Id: 7679884-1-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	243	97	242	97	90-110	0	20	mg/kg	06.13.19 23:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092273 — Matrix: Solid — Date Prep: 06.13.19
MB Sample Id: 7679885-1-BLK — LCS Sample Id: 7679885-1-BKS — LCSD Sample Id: 7679885-1-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	250	100	251	100	90-110	0	20	mg/kg	06.13.19 17:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092271 — Matrix: Soil — Date Prep: 06.13.19
Parent Sample Id: 627517-011 — MS Sample Id: 627517-011 S — MSD Sample Id: 627517-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.54	250	252	97	251	97	90-110	0	20	mg/kg	06.14.19 00:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092271 — Matrix: Soil — Date Prep: 06.13.19
Parent Sample Id: 627518-002 — MS Sample Id: 627518-002 S — MSD Sample Id: 627518-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	175	248	413	96	412	96	90-110	0	20	mg/kg	06.14.19 01:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3092273 — Matrix: Soil — Date Prep: 06.13.19
Parent Sample Id: 627513-006 — MS Sample Id: 627513-006 S — MSD Sample Id: 627513-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	44.4	250	303	103	303	103	90-110	0	20	mg/kg	06.13.19 19:04	

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 627519

LT Environmental, Inc.

PLU 301 H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092273 Matrix: Soil Date Prep: 06.13.19
Parent Sample Id: 627519-003 MS Sample Id: 627519-003 S MSD Sample Id: 627519-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	938	250	1100	65	1100	65	90-110	0	20	mg/kg	06.13.19 17:56	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092270 Matrix: Solid Date Prep: 06.13.19
MB Sample Id: 7679869-1-BLK LCS Sample Id: 7679869-1-BKS LCSD Sample Id: 7679869-1-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	1070	107	1030	103	70-135	4	20	mg/kg	06.14.19 00:14	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1060	106	70-135	2	20	mg/kg	06.14.19 00:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		115		107		70-135	%	06.14.19 00:14
o-Terphenyl	80		93		103		70-135	%	06.14.19 00:14

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092433 Matrix: Solid Date Prep: 06.14.19
MB Sample Id: 7680002-1-BLK LCS Sample Id: 7680002-1-BKS LCSD Sample Id: 7680002-1-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	1140	114	1070	107	70-135	6	20	mg/kg	06.14.19 14:08	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	1040	104	70-135	13	20	mg/kg	06.14.19 14:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		128		100		70-135	%	06.14.19 14:08
o-Terphenyl	94		136	**	105		70-135	%	06.14.19 14:08

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092270 Matrix: Soil Date Prep: 06.13.19
Parent Sample Id: 627517-001 MS Sample Id: 627517-001 S MSD Sample Id: 627517-001 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)	13.7	999	896	88	938	93	70-135	5	20	mg/kg	06.14.19 01:28	
Diesel Range Organics (DRO)	<8.12	999	861	86	891	89	70-135	3	20	mg/kg	06.14.19 01:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		96		70-135	%	06.14.19 01:28
o-Terphenyl	76		82		70-135	%	06.14.19 01:28

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

QC Summary 627519

LT Environmental, Inc.

PLU 301 H

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3092433 | Matrix: Soil | Date Prep: 06.14.19
Parent Sample Id: 627521-001 | MS Sample Id: 627521-001 S | MSD Sample Id: 627521-001 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)	14.7	999	954	94	916	90	70-135	4	20	mg/kg	06.14.19 15:24	
Diesel Range Organics (DRO)	9.77	999	922	91	953	95	70-135	3	20	mg/kg	06.14.19 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		89		70-135	%	06.14.19 15:24
o-Terphenyl	77		94		70-135	%	06.14.19 15:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3092691 | Matrix: Solid | Date Prep: 06.17.19
MB Sample Id: 7680033-1-BLK | LCS Sample Id: 7680033-1-BKS | LCSD Sample Id: 7680033-1-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	0.0937	94	0.0968	97	70-130	3	35	mg/kg	06.18.19 04:56	
Toluene	<0.00200	0.100	0.0860	86	0.0893	90	70-130	4	35	mg/kg	06.18.19 04:56	
Ethylbenzene	<0.00200	0.100	0.0933	93	0.0973	98	70-130	4	35	mg/kg	06.18.19 04:56	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.194	97	70-130	4	35	mg/kg	06.18.19 04:56	
o-Xylene	<0.00200	0.100	0.0909	91	0.0940	95	70-130	3	35	mg/kg	06.18.19 04:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		108		70-130	%	06.18.19 04:56
4-Bromofluorobenzene	91		101		105		70-130	%	06.18.19 04:56

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3092691 | Matrix: Soil | Date Prep: 06.17.19
Parent Sample Id: 627518-003 | MS Sample Id: 627518-003 S | MSD Sample Id: 627518-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.101	101	0.0980	98	70-130	3	35	mg/kg	06.18.19 05:40	
Toluene	<0.00201	0.100	0.0931	93	0.0907	91	70-130	3	35	mg/kg	06.18.19 05:40	
Ethylbenzene	<0.00201	0.100	0.0997	100	0.0973	97	70-130	2	35	mg/kg	06.18.19 05:40	
m,p-Xylenes	<0.00402	0.201	0.198	99	0.192	96	70-130	3	35	mg/kg	06.18.19 05:40	
o-Xylene	<0.00201	0.100	0.0957	96	0.0938	94	70-130	2	35	mg/kg	06.18.19 05:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	06.18.19 05:40
4-Bromofluorobenzene	103		104		70-130	%	06.18.19 05:40

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

Chain of Custody

XENCO LABORATORIES

Work Order No: 627519

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:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	CT Environmental Inc	Company Name:	XTO - Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(432) 704 - 5178	Email:	dmoir@ctenv.com rmcafee@ctenv.com

Work Order Comments

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

		Turn Around	
Project Name:	PLU 301 H	Routine ☐	
Project Number:		Rush: 3 day	
P.O. Number:	2RP - 2900	Due Date:	
Sampler's Name:	Robert M.		

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4/0.4	Thermometer ID:	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SW01	S	06/07/19	1330	0-5'	1	X	X	X	composite
SW02	↓	↓	1335	0-3'	↓	X	X	X	↓
SW03	↓	↓	1340	0-5'	↓	X	X	X	↓

Work Order Notes

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert M. [signature]	[signature]	6/11/19 16:15	2	[signature]	6/13/19 11:20
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/13/2019 11:20:00 AM

Work Order #: 627519

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: 06/13/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/13/2019
Jessica Kramer

ENSOLUM

APPENDIX D

Photographic Log

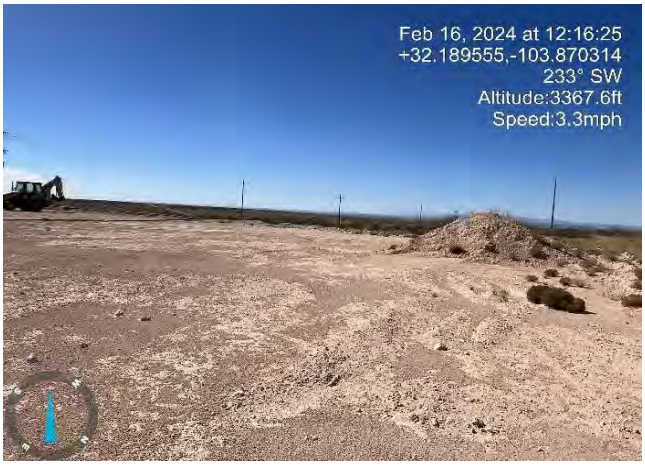
ENSOLUM

Photographic Log
XTO Energy, Inc.
Poker Lake Unit 301H
Incident Number nAB1507941546

Photograph: 1 Date: 2/16/2024
Description: Composite soil sampling activities
View: Northwest

Photograph: 2 Date: 2/16/2024
Description: Composite soil sampling activities
View: East

Photograph: 3 Date: 2/16/2024
Description: Composite soil sampling activities
View: Northwest



Photograph: 4 Date: 2/16/2024
Description: Composite soil sampling activities
View: Southwest

ENSOLUM

APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/23/2024 4:24:31 PM

JOB DESCRIPTION

PLU-301H
03C1558233

JOB NUMBER

890-6205-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

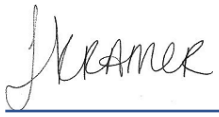
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
2/23/2024 4:24:31 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: PLU-301H

Laboratory Job ID: 890-6205-1
SDG: 03C1558233

Table of Contents

Eurofins Carlsbad
2/23/2024

Definitions/Glossary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: PLU-301H

Job ID: 890-6205-1

Job ID: 890-6205-1 Eurofins Carlsbad

Job Narrative
890-6205-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/16/2024 1:27 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-6205-1) and SW03 (890-6205-2).

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-73548/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-73548 and analytical batch 880-73602 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-73548 and analytical batch 880-73602 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Client Sample ID: SW01

Date Collected: 02/16/24 11:55
Date Received: 02/16/24 13:27

Lab Sample ID: 890-6205-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/21/24 14:05	02/23/24 04:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/21/24 14:05	02/23/24 04:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/21/24 14:05	02/23/24 04:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/21/24 14:05	02/23/24 04:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/21/24 14:05	02/23/24 04:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/21/24 14:05	02/23/24 04:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:31*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/23/24 04:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			02/20/24 19:49	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		02/19/24 15:20	02/20/24 19:49	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		02/19/24 15:20	02/20/24 19:49	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		02/19/24 15:20	02/20/24 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*02/19/24 15:20*	*02/20/24 19:49*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/19/24 15:20*	*02/20/24 19:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**148**		4.99		mg/Kg			02/20/24 19:16	1

Client Sample ID: SW03

Date Collected: 02/16/24 12:00
Date Received: 02/16/24 13:27

Lab Sample ID: 890-6205-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/21/24 14:05	02/23/24 04:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/21/24 14:05	02/23/24 04:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/21/24 14:05	02/23/24 04:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/21/24 14:05	02/23/24 04:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/21/24 14:05	02/23/24 04:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/21/24 14:05	02/23/24 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:52*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:52*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Client Sample ID: SW03

Date Collected: 02/16/24 12:00
Date Received: 02/16/24 13:27

Lab Sample ID: 890-6205-2

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/23/24 04:52	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/20/24 20:15	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		02/19/24 15:20	02/20/24 20:15	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		02/19/24 15:20	02/20/24 20:15	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/19/24 15:20	02/20/24 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*02/19/24 15:20*	*02/20/24 20:15*	*1*
o-Terphenyl	*86*		*70 - 130*	*02/19/24 15:20*	*02/20/24 20:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	171		4.97		mg/Kg			02/20/24 19:23	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6205-1	SW01	95	106
890-6205-1 MS	SW01	100	100
890-6205-1 MSD	SW01	98	99
890-6205-2	SW03	97	110
LCS 880-73796/1-A	Lab Control Sample	102	103
LCSD 880-73796/2-A	Lab Control Sample Dup	102	103
MB 880-73775/5-A	Method Blank	76	101
MB 880-73796/5-B	Method Blank	84	92

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-39009-A-1-D MS	Matrix Spike	85	81
880-39009-A-1-E MSD	Matrix Spike Duplicate	83	80
890-6205-1	SW01	83	88
890-6205-2	SW03	83	86
LCS 880-73548/2-A	Lab Control Sample	73	82
LCSD 880-73548/3-A	Lab Control Sample Dup	69 S1-	78
MB 880-73548/1-A - RA2	Method Blank	96	104

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-73775/5-A
Matrix: Solid
Analysis Batch: 73859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73775

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/21/24 11:59	02/22/24 17:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/21/24 11:59	02/22/24 17:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/21/24 11:59	02/22/24 17:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/21/24 11:59	02/22/24 17:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/21/24 11:59	02/22/24 17:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/21/24 11:59	02/22/24 17:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/21/24 11:59*	*02/22/24 17:18*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*02/21/24 11:59*	*02/22/24 17:18*	*1*

Lab Sample ID: MB 880-73796/5-B
Matrix: Solid
Analysis Batch: 73859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73796

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:05	02/23/24 04:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:05	02/23/24 04:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:05	02/23/24 04:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/21/24 14:05	02/23/24 04:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:05	02/23/24 04:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/21/24 14:05	02/23/24 04:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:09*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/21/24 14:05*	*02/23/24 04:09*	*1*

Lab Sample ID: LCS 880-73796/1-A
Matrix: Solid
Analysis Batch: 73859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 73796

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1095		mg/Kg		110	70 - 130		
Toluene			0.100	0.09315		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09085		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1846		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09694		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-73796/2-A
Matrix: Solid
Analysis Batch: 73859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73796

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1218		mg/Kg		122	70 - 130	11	35

QC Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-73796/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73859 — **Prep Batch: 73796**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1031		mg/Kg		103	70 - 130	10	35
Ethylbenzene			0.100	0.1008		mg/Kg		101	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2039		mg/Kg		102	70 - 130	10	35
o-Xylene			0.100	0.1073		mg/Kg		107	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-6205-1 MS — **Client Sample ID: SW01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73859 — **Prep Batch: 73796**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.09564		mg/Kg		95	70 - 130
Toluene	<0.00199	U	0.101	0.08370		mg/Kg		83	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.08265		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1671		mg/Kg		83	70 - 130
o-Xylene	<0.00199	U	0.101	0.08716		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-6205-1 MSD — **Client Sample ID: SW01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73859 — **Prep Batch: 73796**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09183		mg/Kg		92	70 - 130	4	35
Toluene	<0.00199	U	0.100	0.08084		mg/Kg		81	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.07961		mg/Kg		80	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1605		mg/Kg		80	70 - 130	4	35
o-Xylene	<0.00199	U	0.100	0.08265		mg/Kg		83	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: LCS 880-73548/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73602 — **Prep Batch: 73548**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	867.7		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-73548/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73602 — **Prep Batch: 73548**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	793.2		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*73*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: LCSD 880-73548/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73602 — **Prep Batch: 73548**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	823.7		mg/Kg		82	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	753.1		mg/Kg		75	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*69*	*S1-*	*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Lab Sample ID: 880-39009-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73602 — **Prep Batch: 73548**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	991	685.5	F1	mg/Kg		67	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	991	783.8		mg/Kg		79	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Lab Sample ID: 880-39009-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73602 — **Prep Batch: 73548**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	991	681.7	F1	mg/Kg		67	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	991	768.0		mg/Kg		77	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*83*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method: 8015B NM - Diesel Range Organics (DRO) (GC) - RA2

Lab Sample ID: MB 880-73548/1-A
Matrix: Solid
Analysis Batch: 73602

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73548

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 - RA2	<50.0	U	50.0		mg/Kg		02/19/24 15:20	02/20/24 08:05	1
Diesel Range Organics (Over C10-C28) - RA2	<50.0	U	50.0		mg/Kg		02/19/24 15:20	02/20/24 08:05	1
OII Range Organics (Over C28-C36) - RA2	<50.0	U	50.0		mg/Kg		02/19/24 15:20	02/20/24 08:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane - RA2	*96*		*70 - 130*	*02/19/24 15:20*	*02/20/24 08:05*	*1*
o-Terphenyl - RA2	*104*		*70 - 130*	*02/19/24 15:20*	*02/20/24 08:05*	*1*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-73544/1-A
Matrix: Solid
Analysis Batch: 73636

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/24 16:00	1

Lab Sample ID: LCS 880-73544/2-A
Matrix: Solid
Analysis Batch: 73636

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.4		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-73544/3-A
Matrix: Solid
Analysis Batch: 73636

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	263.2		mg/Kg		105	90 - 110	1	20

Lab Sample ID: 880-39530-A-3-C MS
Matrix: Solid
Analysis Batch: 73636

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	49.3		251	306.2		mg/Kg		102	90 - 110		

Lab Sample ID: 880-39530-A-3-D MSD
Matrix: Solid
Analysis Batch: 73636

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	49.3		251	306.2		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

GC VOA

Prep Batch: 73775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-73775/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 73796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	5035	
890-6205-2	SW03	Total/NA	Solid	5035	
MB 880-73796/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-73796/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-73796/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6205-1 MS	SW01	Total/NA	Solid	5035	
890-6205-1 MSD	SW01	Total/NA	Solid	5035	

Analysis Batch: 73859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	8021B	73796
890-6205-2	SW03	Total/NA	Solid	8021B	73796
MB 880-73775/5-A	Method Blank	Total/NA	Solid	8021B	73775
MB 880-73796/5-B	Method Blank	Total/NA	Solid	8021B	73796
LCS 880-73796/1-A	Lab Control Sample	Total/NA	Solid	8021B	73796
LCSD 880-73796/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	73796
890-6205-1 MS	SW01	Total/NA	Solid	8021B	73796
890-6205-1 MSD	SW01	Total/NA	Solid	8021B	73796

Analysis Batch: 73958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	Total BTEX	
890-6205-2	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 73548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	8015NM Prep	
890-6205-2	SW03	Total/NA	Solid	8015NM Prep	
MB 880-73548/1-A - RA2	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-73548/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-73548/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-39009-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-39009-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 73602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	8015B NM	73548
890-6205-2	SW03	Total/NA	Solid	8015B NM	73548
MB 880-73548/1-A - RA2	Method Blank	Total/NA	Solid	8015B NM	73548
LCS 880-73548/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	73548
LCSD 880-73548/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	73548
880-39009-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	73548
880-39009-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	73548

QC Association Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

GC Semi VOA

Analysis Batch: 73745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Total/NA	Solid	8015 NM	
890-6205-2	SW03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 73544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Soluble	Solid	DI Leach	
890-6205-2	SW03	Soluble	Solid	DI Leach	
MB 880-73544/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73544/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73544/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-39530-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-39530-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 73636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6205-1	SW01	Soluble	Solid	300.0	73544
890-6205-2	SW03	Soluble	Solid	300.0	73544
MB 880-73544/1-A	Method Blank	Soluble	Solid	300.0	73544
LCS 880-73544/2-A	Lab Control Sample	Soluble	Solid	300.0	73544
LCSD 880-73544/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73544
880-39530-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	73544
880-39530-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	73544

Lab Chronicle

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Client Sample ID: SW01

Date Collected: 02/16/24 11:55
Date Received: 02/16/24 13:27

Lab Sample ID: 890-6205-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	73796	02/21/24 14:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73859	02/23/24 04:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73958	02/23/24 04:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			73745	02/20/24 19:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	73548	02/19/24 15:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	73602	02/20/24 19:49	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	73544	02/19/24 14:31	SA	EET MID
Soluble	Analysis	300.0		1			73636	02/20/24 19:16	CH	EET MID

Client Sample ID: SW03

Date Collected: 02/16/24 12:00
Date Received: 02/16/24 13:27

Lab Sample ID: 890-6205-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	73796	02/21/24 14:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73859	02/23/24 04:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73958	02/23/24 04:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			73745	02/20/24 20:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	73548	02/19/24 15:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	73602	02/20/24 20:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	73544	02/19/24 14:31	SA	EET MID
Soluble	Analysis	300.0		1			73636	02/20/24 19:23	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: PLU-301H

Job ID: 890-6205-1
SDG: 03C1558233

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-6205-1	SW01	Solid	02/16/24 11:55	02/16/24 13:27
890-6205-2	SW03	Solid	02/16/24 12:00	02/16/24 13:27

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: ____________

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU-301H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558233		
Project Location:	32.199307,-103.870133	Due Date:	
Sampler's Name:	Meredith Roberts/Unrea Antillon	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	T/M30
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

ANALYSIS REQUEST

890-6205 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	BTEX	Chlorides	TPH	Sample Comments
SW01	S	2/16/24	1155	0-5'	C	1	X	X	X	Incident #: nAB1507941546
SW03	↓	↓	1200	0-5'	↓	↓	↓	↓	↓	Cost Center: 1138881001

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

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 SiO_2 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 Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	13:27 2/16	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6205-1
SDG Number: 03C1558233

Login Number: 6205
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6205-1
SDG Number: 03C1558233

Login Number: 6205
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/19/24 08:27 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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 430852

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1507941546**
Incident Name	**NAB1507941546 POKER LAKE UNIT #301H @ 30-015-36924**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-36924] POKER LAKE UNIT #301H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	POKER LAKE UNIT #301H
Date Release Discovered	03/16/2015
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 | Other (Specify) | Crude Oil | Released: 13 BBL | Recovered: 3 BBL | Lost: 10 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 13 BBL | Recovered: 2 BBL | Lost: 11 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**

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: 02/11/2025

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: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
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 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 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 1 and 5 (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 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 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)	148
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	0
GRO+DRO	(EPA SW-846 Method 8015M)	0
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		04/09/2018
On what date will (or did) the final sampling or liner inspection occur		02/16/2024
On what date will (or was) the remediation complete(d)		02/16/2024
What is the estimated surface area (in square feet) that will be reclaimed		2500
What is the estimated volume (in cubic yards) that will be reclaimed		370
What is the estimated surface area (in square feet) that will be remediated		2500
What is the estimated volume (in cubic yards) that will be remediated		370
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.		

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:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	LEA LAND LANDFILL [fEEM0112342028]
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: 02/11/2025
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.	

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:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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

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: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**312763**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/16/2024**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**1000**

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	2500
What was the total volume (cubic yards) remediated	370
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	2500
What was the total volume (in cubic yards) reclaimed	370
Summarize any additional remediation activities not included by answers (above)	Excavation activities were conducted at the Site to address impacts to soil resulting from the March 2015 release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. On February 16, 2024, Ensolum personnel returned to resample previously excavated sidewall samples from the previously backfilled excavation to 5 feet below ground surface. Laboratory results were in compliance with the most stringent Table 1 Closure Criteria A soil boring installed within 0.5 miles of the Site confirmed depth to groundwater greater than 100 feet bgs.

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: 02/11/2025

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:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 430852
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	2/11/2025