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

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 01 2016
RECEIVED

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

nAB1606239294 2RP-3576

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Poker Lake Unit 78 Tank Battery	Facility Type: Exploration and Production

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

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E	660		660		Eddy

Latitude: 32.194170 **Longitude**: 103.827430

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 65 barrels PW and 54 barrels Oil	Volume Recovered: 50 barrels oil and 50 barrels PW
Source of Release: Failed HT Gasket	Date and Hour of Occurrence: 2-27-16 @ 1:00pm	Date and Hour of Discovery: 2-27-16 @ 1:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos BLM	
By Whom? Bradley Blevins via email	Date and Hour: 2-27-16 @ 2:42pm	
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.*

BOPCO EHS was notified of a release that occurred at the PLU 78 due to a failed heater treater gasket. A vacuum truck was called to the location to recover the fluid within the firewall.

Describe Area Affected and Cleanup Action Taken.*

The majority of the fluid was contained within the earth berm with the exception of a light overspray on the northern half of the location. A vacuum truck was called to the location and recovered 50 barrels of oil and 50 barrels of produced water from the firewall.

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

Signature: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Forcman

E-mail Address: bblevins@basspet.com

Date: 3-1-16 Phone: 432-214-3704

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 3/2/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/2/16

2RP-3576

* 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	nAB1606239294
District RP	
Facility ID	2RP-3576
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Garrett Green	Contact Telephone: (575) 200-0729
Contact email: garrett.green@exxonmobil.com	Incident #: 2RP-3576
Contact mailing address: 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.194170 Longitude -103.827430
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 78 Tank Battery	Site Type Exploration and Production
Date Release Discovered 2/27/2016	API# *(if applicable)* 30-015-27536

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 54	Volume Recovered (bbls) 50
☒ Produced Water	Volume Released (bbls) 65	Volume Recovered (bbls) 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A gasket failed on a heater-treater. The majority of the fluid was contained within the earthen process equipment berm, with a light overspray on the northern half of the location. A vacuum truck recovered 50 bbls of oil and 50 bbls of produced water from within the firewall.

State of New Mexico
Oil Conservation Division

Incident ID	nAB1606239294
District RP	2RP-3576
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 volume was 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 Bradley Blevins via email to Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos (BLM) on 2/27/2016 at 2:42 pm.

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:
NA

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: Garrett Green Title: SSHE Coordinator

Signature: Date: 6/28/2023

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAB1606239294
District RP	2RP-3576
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	nAB1606239294
District RP	2RP-3576
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: 6/28/2023

Incident ID	nAB1606239294
District RP	2RP-3576
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: Garrett Green Title: SSHE Coordinator

Signature:  Date: 6/28/2023

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

OCD Only

Received by: Shelly Wells Date: 6/28/2023

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: _____

ENSOLUM

June 28, 2023

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

Re: Closure Request Addendum
Poker Lake Unit 78 Tank Battery
Incident Number nAB1606239294
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 November 15, 2019. This addendum provides an update to the depth to groundwater determination activities at the Poker Lake Unit 78 Tank Battery (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the November 15, 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 nAB1606239294.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.194170°, -103.827430°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On February 27, 2016, a gasket failed on a heater-treater. As a result, approximately 54 barrels (bbls) of crude oil and 65 bbls of produced water were released. The majority of the release was contained within the earthen berm around process equipment. The northern half of the well pad was affected by a light overspray. A vacuum truck recovered approximately 50 bbls of crude oil and 50 bbls of produced water. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on March 1, 2016. The release was assigned Remediation Permit (RP) Number 2RP-3576 and Incident Number nAB1606239294.

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 November 15, 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 site characterization 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
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg
- Chloride: 20,000 mg/kg

Between June 2019 and August 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the February 27, 2016, crude oil and produced water release. Closure was requested on November 15, 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 original November 15, 2019, *Closure Request*.

On March 22, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1606239294 for the 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.*

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

New depth to groundwater data became available since the submittal of the November 15, 2019, *Closure Request*. A borehole was drilled approximately 0.42 miles southwest of the Site during October 2020, for determination of regional groundwater depth. The borehole was permitted by the New Mexico Office of the State Engineer (NMOSE) as well C-04478. The location of the borehole is presented on Figure 1. The borehole was advanced to a depth of 110 feet below ground surface (bgs) and no groundwater was encountered. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater was greater than 110 feet bgs. The borehole was properly abandoned using drill cuttings and hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and 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.

ADDITIONAL SOIL SAMPLING ACTIVITIES

Horizontal delineation of a release was not enforced, nor practiced, until it became more frequently required by NMOCD through denial language throughout 2021. Therefore, in order to ensure NMOCD approval of this *Closure Request Addendum*, horizontal delineation activities were completed at the Site. On June 6, 2023, Ensolum personnel collected assessment soil samples SS01 through SS03 from a depth of 0.5 feet bgs to the east, west, and south of the historical release extent. The 2019 delineation sample BH01@1' provided delineation of the release to the north. The location of assessment samples SS01 through SS03, collected in 2023 and BH01@1' collected in 2019 are presented on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for assessment samples SS01 through SS03 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the horizontal extent of the release.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the February 27, 2016, release of crude oil and produced water. Based on the horizontal delineation activities and 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 presented in the November 15, 2019, *Closure Request*, included as Appendix E, XTO respectfully requests no further action for Incident Number nAB1606239294.

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

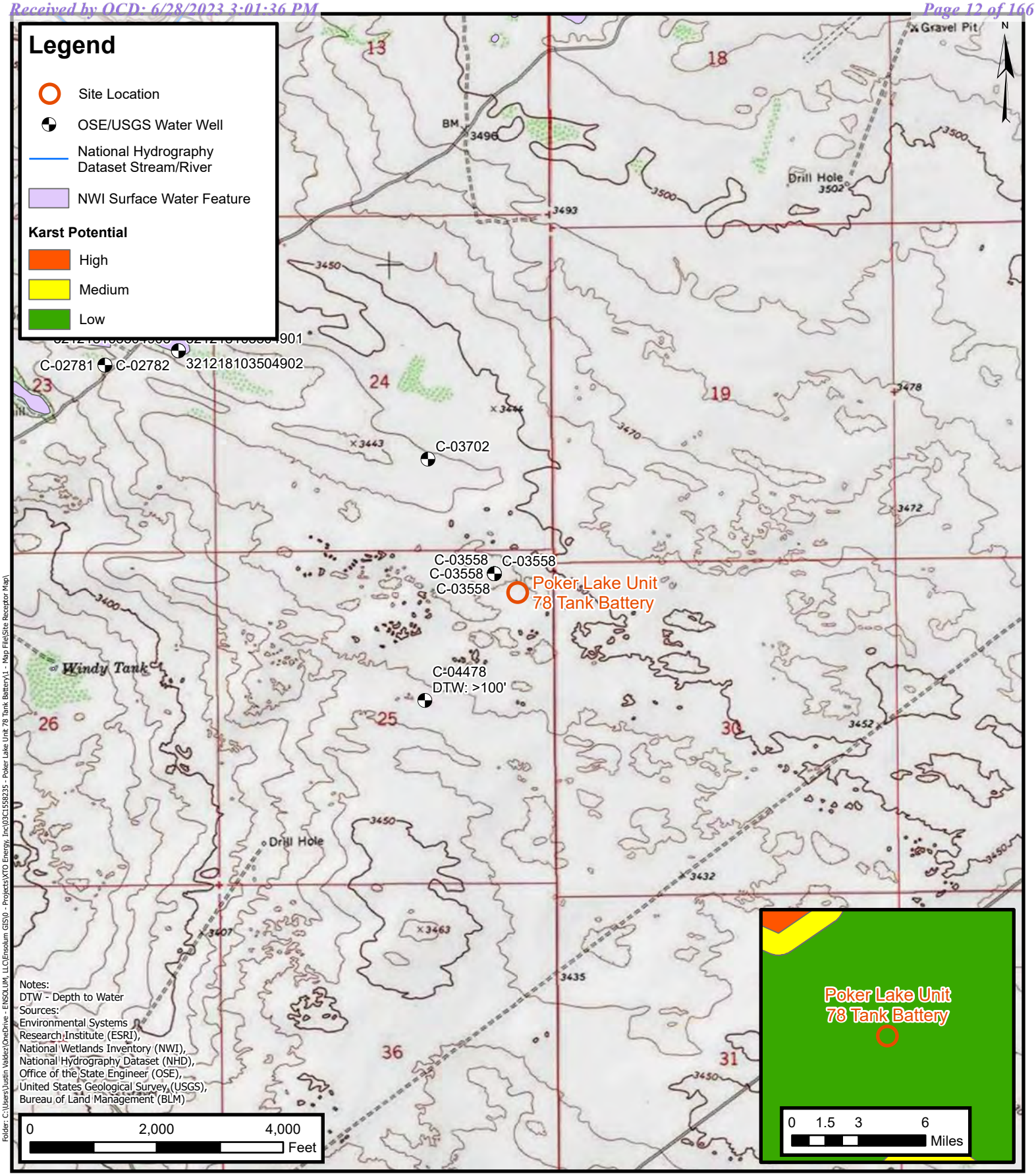
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map
Figure 2 Soil Sample Locations (2023)
Table 1 Soil Sample Analytical Results (2023)

ENSOLUM

FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558235 - Poker Lake Unit 78 Tank Battery\1 - Map Files\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Poker Lake Unit 78 Tank Battery
Incident Number: NAB1606239294
Unit A, Section 25, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE 1

Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558235 - Poker Lake Unit 78 Tank Battery\1 - Map File\Delineation Soil Sample Locations Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
Poker Lake Unit 78 Tank Battery
Incident Number: NAB1606239294
Unit A, Section 25, T24S, R30E
Eddy County, New Mexico

FIGURE 2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS (2023)
Poker Lake Unit 78 Tank Battery
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 I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Assessment Soil Samples										
SS01	0.5'	6/6/2023	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	185
SS02	0.5'	6/6/2023	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	85.9
SS03	0.5'	6/6/2023	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	51.9
BH01	1.0'	6/26/2019	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	23.5

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 I 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

Referenced Well Records

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04478 POD1	3	3	2	25	24S	30E	610077	3562041

Driller License: 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

Driller Name: ATKINS, JACKIE D.UELENER

Drill Start Date: 10/07/2020 **Drill Finish Date:** 10/07/2020 **Plug Date:** 10/15/2020

Log File Date: 10/29/2020 **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** 0 feet **Depth Water:** 0 feet

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

2020 OCT 29 PM 2:03

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4478

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	11'	22.57"	N
	LONGITUDE	-103°	49'	56.14"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SW SE NE Sec. 25 T24S R30E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/07/2020	10/07/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4478	POD NO. 1	TRN NO. 678382	
LOCATION 24S.30E.25 2.3.3		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3	3	Sand, fine-grained, poorly-graded , Red-Brown	Y ✓ N	
3	5	2	Gravel, 20-30 mil, well graded, little clay	Y ✓ N	
5	13	8	Caliche with some gravel (5-20 mil.) Tan/ Brown	Y ✓ N	
13	24	9	Sand, fine-grained, well-graded some silt, Tan/ Red	Y ✓ N	
24	34	10	Sand, Medium-grained, well-graded some silt, Tan/ Red	Y ✓ N	
34	44	10	Sand, Large-grained, well-graded some silt, Dark Brown	Y ✓ N	
44	110	66	Sand, fine-grained, well-graded, some clay, moist, caliche fragments Red/Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from LTE on-site geologist.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 10/26/2020

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4478	POD NO. 1	TRN NO. 678382	
LOCATION 24S-30E-25 2-3-3		WELL TAG ID NO. NA	PAGE 2 OF 2

2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAESGKFRG9AU3NcytvOCSRntC1Y-zTs43Y

"2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:14:03 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:14:17 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:21:12 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:22:09 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:22:09 PM GMT

Adobe Sign

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Poker Lake Unit 78 Tank Battery
Incident Number nAB1606239294

Photograph 1 Date: 6/6/2023
Description View of historical release area
View: East

Photograph 2 Date: 6/6/2023
Description: View of historical release area
View: West

Photograph 3 Date: 6/6/2023
Description View of well pad
View: North

Photograph 4 Date: 6/6/2023
Description: View of well pad
View: South

ENSOLUM

APPENDIX C

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 6/14/2023 3:13:55 PM

JOB DESCRIPTION

Poker Lake Unit 78 Tank Battery
SDG NUMBER 03C1558235

JOB NUMBER

890-4789-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

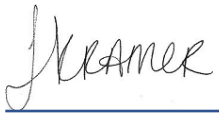
Eurofins Carlsbad

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
6/14/2023 3:13:55 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Laboratory Job ID: 890-4789-1
SDG: 03C1558235

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4789-1
Project/Site: Poker Lake Unit 78 Tank Battery SDG: 03C1558235

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Job ID: 890-4789-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4789-1

Receipt
The samples were received on 6/6/2023 3:42 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 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4789-1), SS02 (890-4789-2) and SS03 (890-4789-3).

GC VOA
Method 8021B: The CCV was biased low for some analytes. However, since the internal standard recoveries were acceptable the data was qualified and reported.(CCV 880-55090/33) and (CCV 880-55090/64)

Method 8021B: The LCS was biased low for m-p xylenes, however since the LCSD was acceptable the data was qualified and reported. (LCS 880-55142/1-A)

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-55142 and analytical batch 880-55090 recovered outside control limits for the following analytes: Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-55142 and analytical batch 880-55090 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-55037 and analytical batch 880-55385 recovered outside control limits for the following analytes: Benzene and Toluene. These analytes were biased high in the LCSD however, they were acceptable in the LCS and only one is required by method; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-4789-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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 samples were outside control limits: (LCS 880-55158/2-A) and (LCSD 880-55158/3-A). Evidence of matrix interferences is not obvious.

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: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Client Sample ID: SS01

Lab Sample ID: 890-4789-1
Matrix: Solid
Date Collected: 06/06/23 13:45
Date Received: 06/06/23 15:42
Sample Depth: 0.5'

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		06/08/23 13:04	06/13/23 21:51	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/08/23 13:04	06/13/23 21:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 21:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 21:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 21:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*06/08/23 13:04*	*06/13/23 21:51*	*1*
1,4-Difluorobenzene (Surr)	*178*	*S1+*	*70 - 130*	*06/08/23 13:04*	*06/13/23 21:51*	*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			06/14/23 09:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			06/13/23 12:05	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	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 04:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 04:11	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/13/23 04:11*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/09/23 14:01*	*06/13/23 04:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**185**		5.01		mg/Kg			06/09/23 19:33	1

Client Sample ID: SS02

Lab Sample ID: 890-4789-2
Matrix: Solid
Date Collected: 06/06/23 13:50
Date Received: 06/06/23 15:42
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/09/23 12:15	06/10/23 13:13	1
Toluene	<0.00200	U *1	0.00200		mg/Kg		06/09/23 12:15	06/10/23 13:13	1
Ethylbenzene	<0.00200	U *1	0.00200		mg/Kg		06/09/23 12:15	06/10/23 13:13	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401		mg/Kg		06/09/23 12:15	06/10/23 13:13	1
o-Xylene	<0.00200	U *1	0.00200		mg/Kg		06/09/23 12:15	06/10/23 13:13	1
Xylenes, Total	<0.00401	U *- *1	0.00401		mg/Kg		06/09/23 12:15	06/10/23 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/09/23 12:15*	*06/10/23 13:13*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Client Sample ID: SS02

Lab Sample ID: 890-4789-2
Matrix: Solid
Date Collected: 06/06/23 13:50
Date Received: 06/06/23 15:42
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 12:15*	*06/10/23 13:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/12/23 13:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/13/23 12:05	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	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 04:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 04:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 04:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/13/23 04:51*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/09/23 14:01*	*06/13/23 04:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**85.9**		4.96	mg/Kg			06/09/23 19:39	1

Client Sample ID: SS03

Lab Sample ID: 890-4789-3
Matrix: Solid
Date Collected: 06/06/23 13:55
Date Received: 06/06/23 15:42
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/09/23 12:15	06/10/23 13:33	1
Toluene	<0.00202	U *1	0.00202	mg/Kg		06/09/23 12:15	06/10/23 13:33	1
Ethylbenzene	<0.00202	U *1	0.00202	mg/Kg		06/09/23 12:15	06/10/23 13:33	1
m-Xylene & p-Xylene	<0.00404	U *- *1	0.00404	mg/Kg		06/09/23 12:15	06/10/23 13:33	1
o-Xylene	<0.00202	U *1	0.00202	mg/Kg		06/09/23 12:15	06/10/23 13:33	1
Xylenes, Total	<0.00404	U *- *1	0.00404	mg/Kg		06/09/23 12:15	06/10/23 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/09/23 12:15*	*06/10/23 13:33*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 12:15*	*06/10/23 13:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			06/12/23 13:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/13/23 12:05	1

Client Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Client Sample ID: SS03

Date Collected: 06/06/23 13:55
Date Received: 06/06/23 15:42
Sample Depth: 0.5'

Lab Sample ID: 890-4789-3

Matrix: Solid

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	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 05:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 05:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*06/09/23 14:01*	*06/13/23 05:11*	*1*
o-Terphenyl	*116*		*70 - 130*	*06/09/23 14:01*	*06/13/23 05:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.9**		5.03		mg/Kg			06/09/23 19:44	1

Surrogate Summary

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-29010-A-5-B MS	Matrix Spike	109	101
880-29010-A-5-C MSD	Matrix Spike Duplicate	105	102
890-4781-A-1-F MS	Matrix Spike	93	92
890-4781-A-1-G MSD	Matrix Spike Duplicate	108	102
890-4789-1	SS01	113	178 S1+
890-4789-2	SS02	100	94
890-4789-3	SS03	101	94
LCS 880-55037/1-A	Lab Control Sample	97	105
LCS 880-55142/1-A	Lab Control Sample	99	102
LCSD 880-55037/2-A	Lab Control Sample Dup	96	102
LCSD 880-55142/2-A	Lab Control Sample Dup	107	91
MB 880-55037/5-A	Method Blank	90	111
MB 880-55142/5-A	Method Blank	89	110
MB 880-55143/5-A	Method Blank	92	108

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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-29311-A-121-C MS	Matrix Spike	99	94
880-29311-A-121-D MSD	Matrix Spike Duplicate	101	95
890-4789-1	SS01	97	109
890-4789-2	SS02	97	111
890-4789-3	SS03	108	116
LCS 880-55158/2-A	Lab Control Sample	24 S1-	20 S1-
LCSD 880-55158/3-A	Lab Control Sample Dup	24 S1-	19 S1-
MB 880-55158/1-A	Method Blank	97	118

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55037/5-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55037

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*

Lab Sample ID: LCS 880-55037/1-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1164		mg/Kg		116	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1040		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.1933		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09140		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-55037/2-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1440	*+	mg/Kg		144	70 - 130	21	35
Toluene			0.100	0.1378	*+	mg/Kg		138	70 - 130	17	35
Ethylbenzene			0.100	0.1158		mg/Kg		116	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2210		mg/Kg		111	70 - 130	13	35
o-Xylene			0.100	0.1050		mg/Kg		105	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-4781-A-1-F MS
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.101	0.1061		mg/Kg		105	70 - 130		
Toluene	<0.00199	U *+	0.101	0.1028		mg/Kg		102	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4781-A-1-F MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 55385 | **Prep Batch: 55037**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.07489		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1372	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00199	U F1	0.101	0.06696	F1	mg/Kg		66	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4781-A-1-G MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 55385 | **Prep Batch: 55037**

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	0.1063		mg/Kg		106	70 - 130	0	35
Toluene	<0.00199	U *+	0.100	0.1059		mg/Kg		106	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.08181		mg/Kg		82	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1631		mg/Kg		81	70 - 130	17	35
o-Xylene	<0.00199	U F1	0.100	0.07958		mg/Kg		79	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-55142/5-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 55090 | **Prep Batch: 55142**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/09/23 12:15	06/10/23 11:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/09/23 12:15	06/10/23 11:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/09/23 12:15	06/10/23 11:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/09/23 12:15	06/10/23 11:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/09/23 12:15	06/10/23 11:02	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/09/23 12:15	06/10/23 11:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/09/23 12:15*	*06/10/23 11:02*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*06/09/23 12:15*	*06/10/23 11:02*	*1*

Lab Sample ID: LCS 880-55142/1-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 55090 | **Prep Batch: 55142**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09311		mg/Kg		93	70 - 130
Toluene	0.100	0.08637		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.07327		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	0.200	0.1329	*-	mg/Kg		66	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-55142/1-A
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55142

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.07204		mg/Kg		72	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-55142/2-A
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55142

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1184		mg/Kg		118	70 - 130	24	35
Toluene			0.100	0.1302	*1	mg/Kg		130	70 - 130	40	35
Ethylbenzene			0.100	0.1119	*1	mg/Kg		112	70 - 130	42	35
m-Xylene & p-Xylene			0.200	0.2148	*1	mg/Kg		107	70 - 130	47	35
o-Xylene			0.100	0.1043	*1	mg/Kg		104	70 - 130	37	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 880-29010-A-5-B MS
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55142

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0994	0.09418		mg/Kg		95	70 - 130		
Toluene	<0.00198	U *1	0.0994	0.08482		mg/Kg		85	70 - 130		
Ethylbenzene	<0.00198	U *1 F1	0.0994	0.08154		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene	<0.00396	U *- *1 F1	0.199	0.1366	F1	mg/Kg		68	70 - 130		
o-Xylene	0.00558	*1 F1	0.0994	0.08231		mg/Kg		77	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-29010-A-5-C MSD
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55142

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0996	0.09768		mg/Kg		98	70 - 130	4	35
Toluene	<0.00198	U *1	0.0996	0.08104		mg/Kg		81	70 - 130	5	35
Ethylbenzene	<0.00198	U *1 F1	0.0996	0.06698	F1	mg/Kg		67	70 - 130	20	35
m-Xylene & p-Xylene	<0.00396	U *- *1 F1	0.199	0.1094	F1	mg/Kg		54	70 - 130	22	35
o-Xylene	0.00558	*1 F1	0.0996	0.07416	F1	mg/Kg		69	70 - 130	10	35

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-29010-A-5-C MSD
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55142

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-55143/5-A
Matrix: Solid
Analysis Batch: 55090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55143

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/09/23 12:24	06/09/23 23:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/09/23 12:24	06/09/23 23:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/09/23 12:24	06/09/23 23:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/09/23 12:24	06/09/23 23:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/09/23 12:24	06/09/23 23:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/09/23 12:24	06/09/23 23:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*06/09/23 12:24*	*06/09/23 23:26*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*06/09/23 12:24*	*06/09/23 23:26*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-55158/1-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55158

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*

Lab Sample ID: LCS 880-55158/2-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55158

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	905.0		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	982.0		mg/Kg		98	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*24*	*S1-*	*70 - 130*
o-Terphenyl	*20*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: LCSD 880-55158/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55236 — **Prep Batch: 55158**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	890.2		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	970.1		mg/Kg		97	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*24*	*S1-*	*70 - 130*
o-Terphenyl	*19*	*S1-*	*70 - 130*

Lab Sample ID: 880-29311-A-121-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55236 — **Prep Batch: 55158**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1017		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1088		mg/Kg		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: 880-29311-A-121-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55236 — **Prep Batch: 55158**

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	<49.9	U	999	1035		mg/Kg		100	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1101		mg/Kg		108	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55020/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 55162

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/09/23 17:00	1

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-55020/2-A
Matrix: Solid
Analysis Batch: 55162

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.4		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-55020/3-A
Matrix: Solid
Analysis Batch: 55162

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	254.4		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 880-29276-A-5-B MS
Matrix: Solid
Analysis Batch: 55162

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	91.2		249	349.5		mg/Kg		104	90 - 110		

Lab Sample ID: 880-29276-A-5-C MSD
Matrix: Solid
Analysis Batch: 55162

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	91.2		249	350.2		mg/Kg		104	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

GC VOA

Prep Batch: 55037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	5035	
MB 880-55037/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-2	SS02	Total/NA	Solid	8021B	55142
890-4789-3	SS03	Total/NA	Solid	8021B	55142
MB 880-55142/5-A	Method Blank	Total/NA	Solid	8021B	55142
MB 880-55143/5-A	Method Blank	Total/NA	Solid	8021B	55143
LCS 880-55142/1-A	Lab Control Sample	Total/NA	Solid	8021B	55142
LCSD 880-55142/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55142
880-29010-A-5-B MS	Matrix Spike	Total/NA	Solid	8021B	55142
880-29010-A-5-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55142

Prep Batch: 55142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-2	SS02	Total/NA	Solid	5035	
890-4789-3	SS03	Total/NA	Solid	5035	
MB 880-55142/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55142/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55142/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29010-A-5-B MS	Matrix Spike	Total/NA	Solid	5035	
880-29010-A-5-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 55143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-55143/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 55266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	Total BTEX	
890-4789-2	SS02	Total/NA	Solid	Total BTEX	
890-4789-3	SS03	Total/NA	Solid	Total BTEX	

Analysis Batch: 55385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	8021B	55037
MB 880-55037/5-A	Method Blank	Total/NA	Solid	8021B	55037
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	8021B	55037
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55037
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	55037
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55037

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

GC Semi VOA

Prep Batch: 55158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	8015NM Prep	
890-4789-2	SS02	Total/NA	Solid	8015NM Prep	
890-4789-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	8015B NM	55158
890-4789-2	SS02	Total/NA	Solid	8015B NM	55158
890-4789-3	SS03	Total/NA	Solid	8015B NM	55158
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015B NM	55158
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55158
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55158
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55158
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55158

Analysis Batch: 55416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Total/NA	Solid	8015 NM	
890-4789-2	SS02	Total/NA	Solid	8015 NM	
890-4789-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Soluble	Solid	DI Leach	
890-4789-2	SS02	Soluble	Solid	DI Leach	
890-4789-3	SS03	Soluble	Solid	DI Leach	
MB 880-55020/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55020/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55020/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-29276-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-29276-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 55162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4789-1	SS01	Soluble	Solid	300.0	55020
890-4789-2	SS02	Soluble	Solid	300.0	55020
890-4789-3	SS03	Soluble	Solid	300.0	55020
MB 880-55020/1-A	Method Blank	Soluble	Solid	300.0	55020
LCS 880-55020/2-A	Lab Control Sample	Soluble	Solid	300.0	55020
LCSD 880-55020/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55020
880-29276-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	55020
880-29276-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	55020

Lab Chronicle

Client: Ensolum
Project/Site: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Client Sample ID: SS01

Date Collected: 06/06/23 13:45
Date Received: 06/06/23 15:42

Lab Sample ID: 890-4789-1
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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 21:51	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55266	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55416	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 04:11	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	55020	06/08/23 09:43	KS	EET MID
Soluble	Analysis	300.0		1			55162	06/09/23 19:33	CH	EET MID

Client Sample ID: SS02

Date Collected: 06/06/23 13:50
Date Received: 06/06/23 15:42

Lab Sample ID: 890-4789-2
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			4.99 g	5 mL	55142	06/09/23 12:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55090	06/10/23 13:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55266	06/12/23 13:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55416	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 04:51	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	55020	06/08/23 09:43	KS	EET MID
Soluble	Analysis	300.0		1			55162	06/09/23 19:39	CH	EET MID

Client Sample ID: SS03

Date Collected: 06/06/23 13:55
Date Received: 06/06/23 15:42

Lab Sample ID: 890-4789-3
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			4.95 g	5 mL	55142	06/09/23 12:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55090	06/10/23 13:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55266	06/12/23 13:03	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55416	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 05:11	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55020	06/08/23 09:43	KS	EET MID
Soluble	Analysis	300.0		1			55162	06/09/23 19:44	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: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

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	T104704400-22-25	06-30-23

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: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

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: Poker Lake Unit 78 Tank Battery

Job ID: 890-4789-1
SDG: 03C1558235

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4789-1	SS01	Solid	06/06/23 13:45	06/06/23 15:42	0.5'
890-4789-2	SS02	Solid	06/06/23 13:50	06/06/23 15:42	0.5'
890-4789-3	SS03	Solid	06/06/23 13:55	06/06/23 15:42	0.5'

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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.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:	Poker Lake Unit 78 Tank Battery	Turn Around	
Project Number:	03C1558235	☑ Routine ☐ Rush	
Project Location:	32.194170, -103.827430	Due Date:	5 days
Sampler's Name:	Mariaha O'Dell	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:	TMH 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Parameters
SS01	S	6/6/2023	13:45	0.5'	G	1		x	x	x	
SS02	S	6/6/2023	13:50	0.5'	G	1		x	x	x	
SS03	S	6/6/2023	13:55	0.5'	G	1		x	x	x	

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_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

Sample Comments

Incident ID:
nAB1606239294
Cost Center:
1136511001
API: 30-015-27536
Tacoma Morrissey:
tmorrissey@ensolum.com

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		6/6/23 1542	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

6/14/2023

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4789-1
SDG Number: 03C1558235

Login Number: 4789
List Number: 1
Creator: Stutzman, Amanda

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: 890-4789-1
SDG Number: 03C1558235

Login Number: 4789
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/08/23 10:12 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	

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Green, Garrett J; DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 5/29/23 - 6/2/23)
Date: Thursday, May 25, 2023 3:59:35 PM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of May 29, 2023.

Tuesday
- PLU BS 15H / NAB1821157574
- JRU 17 Battery / nJMW1314127699 & nAB1506430295

Wednesday
- Poker Lake Unit 78 / nAB1606239294
- PLU-CVX-JV-BS #016H / nAB1521535958

Friday
- PLU 25 BD CTB / nAPP2310045769
- JRU 17 Battery / nJMW1314127699 & nAB1506430295

Thank you,

Melanie Collins

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

ENSOLUM

APPENDIX E

November 15, 2019, Closure Request

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

November 15, 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 78 Tank Battery
Remediation Permit Number 2RP-3576
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 78 Tank Battery (Site) in Unit A, Section 25, 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 February 27, 2016, a gasket failed on a heater-treater. As a result, approximately 54 barrels (bbls) of crude oil and 65 bbls of produced water were released. The majority of the release was contained within the earthen berm around process equipment. The northern half of the well pad was affected by a light overspray. A vacuum truck recovered approximately 50 bbls of crude oil and 50 bbls of produced water. 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 1, 2016, and was assigned Remediation Permit (RP) Number 2RP-3576 (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 8,180 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 3,410 feet above mean sea level (AMSL), which is approximately 40 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 10,600 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. 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

During June and August 2019, LTE personnel was at the Site to oversee site assessment activities to delineate impacted soil. Boreholes and potholes were advanced via hand auger or backhoe at eight locations on the well pad, within and around the release extent. Boreholes BH01 through BH06 and potholes PH01 and PH02 were advanced to a depth of 4 feet bgs. Two delineation soil samples were collected from each borehole and pothole from depths of 1 foot and 4 feet bgs. Soil from the boreholes and 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 the boreholes and potholes were

logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 2.

On August 27, 2019, LTE personnel was at the Site to oversee excavation of impacted soil as indicated by potholing activities, visual observations, and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth of 2 feet bgs. 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 SW04 were collected from the sidewalls of the excavation from depths ranging from the surface to 2 feet bgs. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from a depth of 2 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 3.

The delineation and excavation 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 Xenco Laboratories (Xenco) in Midland, Texas, 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 excavation measured approximately 360 square feet in area with a depth of 2 feet bgs. A total of approximately 30 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH04, BH06, and potholes PH01 and PH02, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation soil sample BH05, collected at a depth of 1 foot indicated that GRO/DRO and TPH concentrations exceeded the Closure Criteria. Subsequent delineation soil sample BH05A collected at a depth of 4 feet bgs was compliant with the Closure Criteria. Based on the laboratory analytical results, impacted soil was excavated from the area around borehole BH05.

Laboratory analytical results for excavation soil samples SW01 through SW04, FS01, and FS02, 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 the February 27, 2016, 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 final 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-3576. 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.

Aimee Cole
Project Environmental Scientist

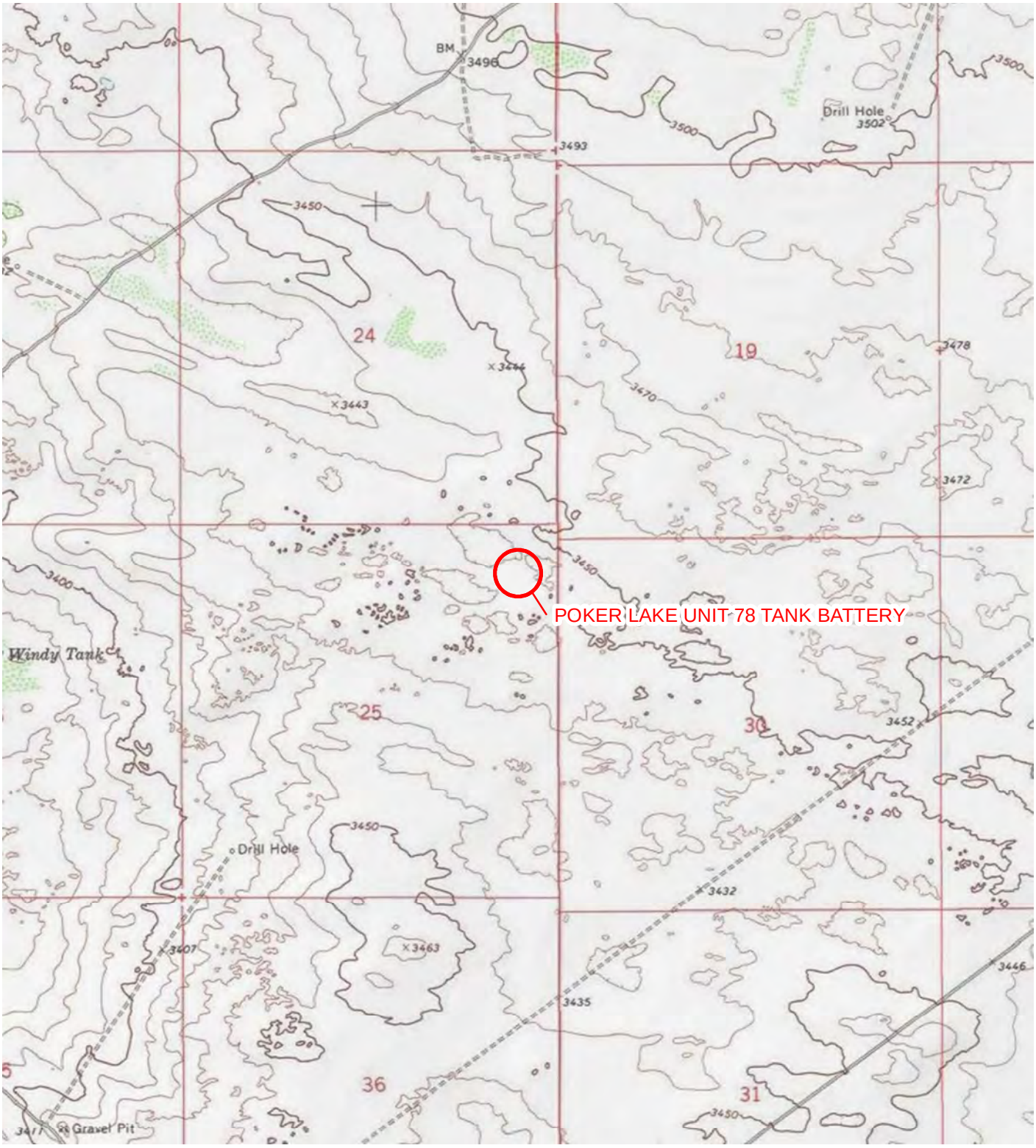
Ashley L. Ager, P.G.
Senior Geologist

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

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

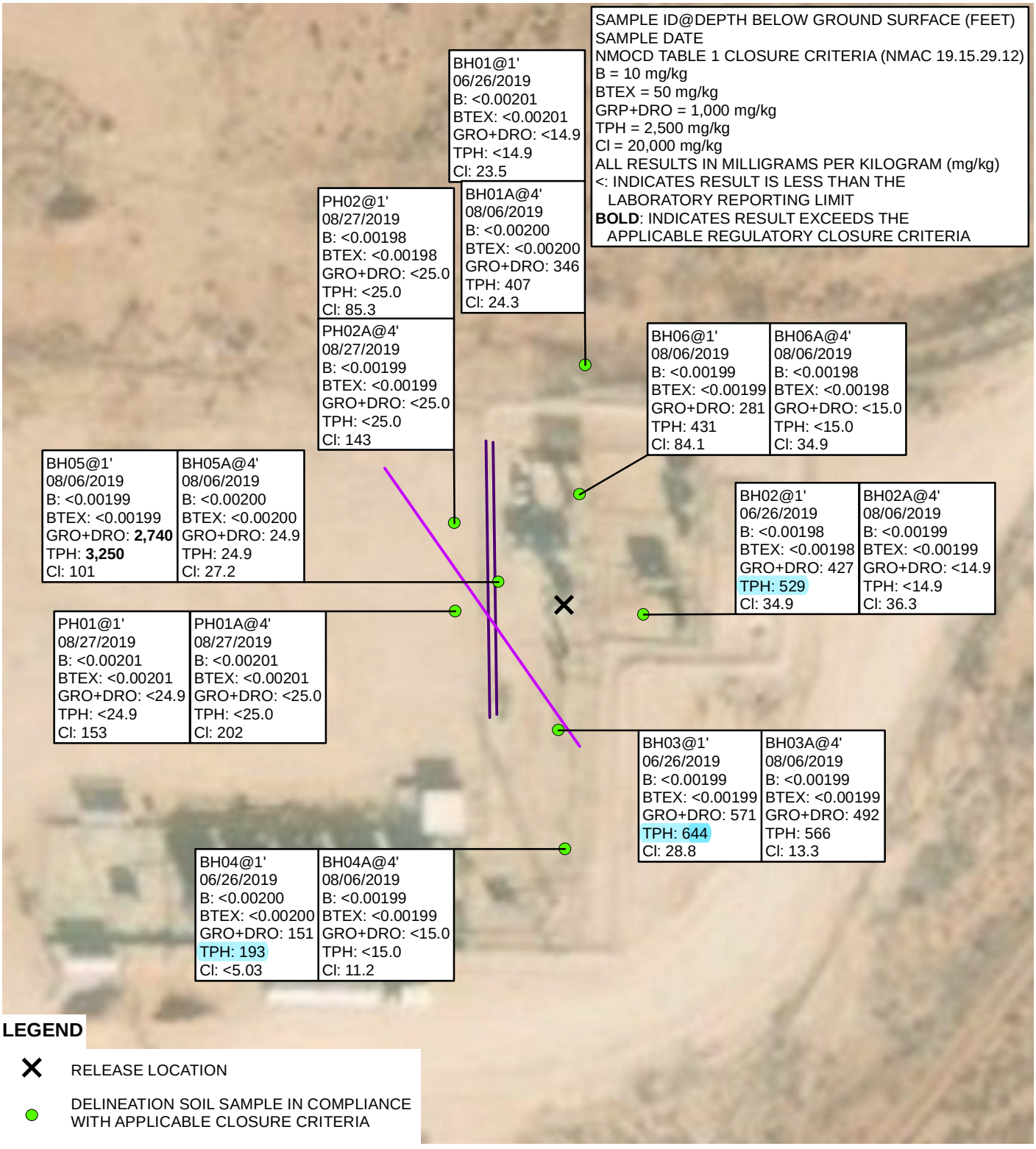
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3576

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

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



LEGEND

- ✕ RELEASE LOCATION
- ● DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- FLARE LINE
- SURFACE GAS LINE

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3576

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 78 TANK BATTERY
UNIT A SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918131_POKER LAKE UNIT #78 SWD\012918131_FIG02_DELINEATION_3576.mxd

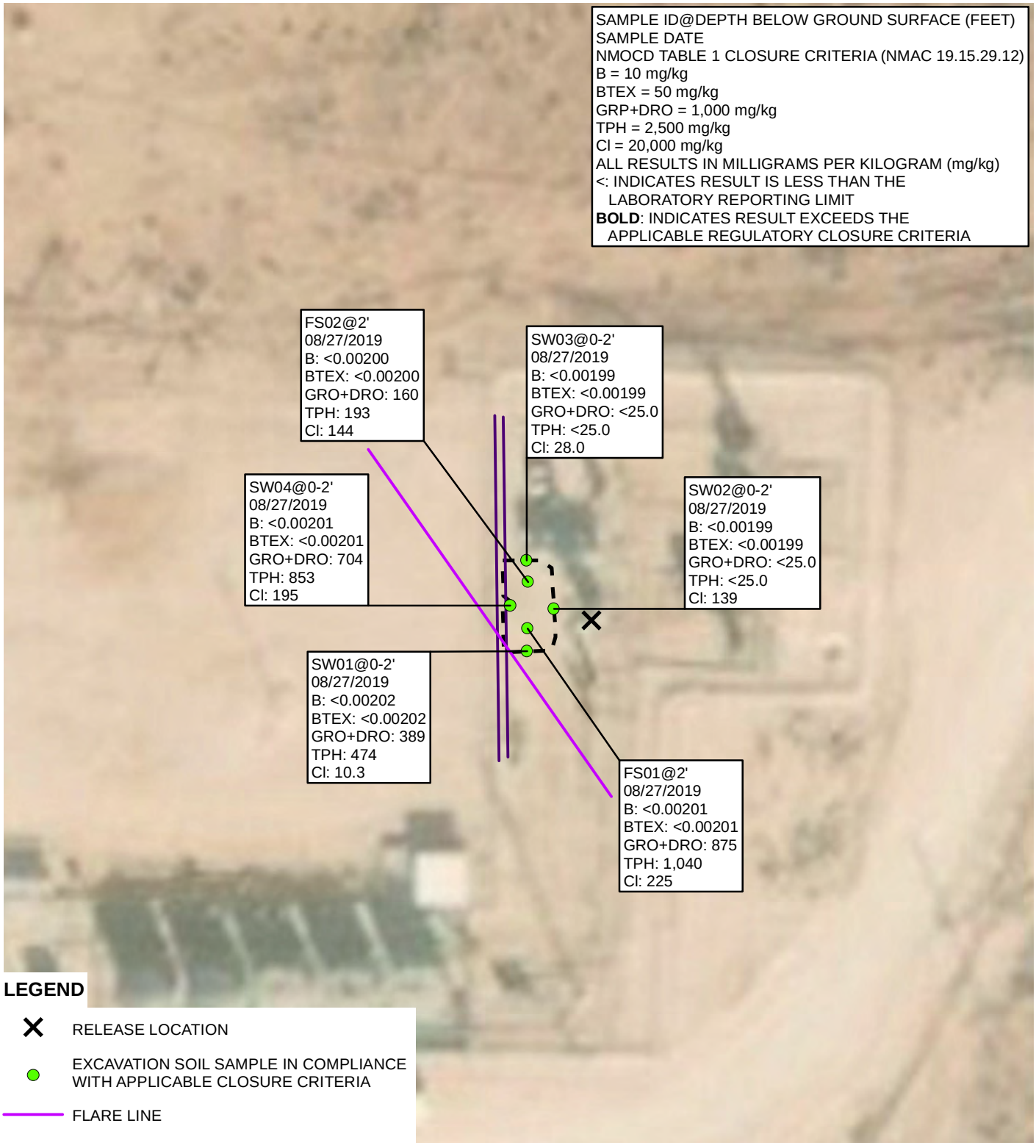


FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 78 TANK BATTERY
UNIT A SEC 25 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918131_POKER LAKE UNIT #78 SWD\012918131_FIG03_EXCAVATION_3576.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS
POKER LAKE UNIT 78 TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-3576
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)
BH01	1	06/26/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	23.5
BH01A	4	08/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	346	61.4	346	407	24.3
BH02	1	06/26/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	427	102	427	529	34.9
BH02A	4	08/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	36.3
BH03	1	06/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	571	72.5	571	644	28.8
BH03A	4	08/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	492	74.4	492	566	13.3
BH04	1	06/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	151	42.3	151	193	<5.03
BH04A	4	08/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	11.2
BH05	1	08/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	2,740	510	**2,740**	**3,250**	101
BH05A	4	08/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	24.9	<15.0	24.9	24.9	27.2
BH06	1	08/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	281	150	281	431	84.1
BH06A	4	08/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	34.9
PH01	1	08/27/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<24.9	<24.9	<24.9	<24.9	<24.9	153
PH01A	4	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	202
PH02	1	08/27/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	85.3
PH02A	4	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	143
FS01	2	08/27/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	875	163	875	1,040	225
FS02	2	08/27/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	160	32.9	160	193	144
SW01	0 - 2	08/27/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<24.9	389	85.3	389	474	10.3
SW02	0 - 2	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	139
SW03	0 - 2	08/27/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	28.0
SW04	0 - 2	08/27/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<24.9	704	149	704	853	195
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
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3576)

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

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 01 2016
RECEIVED

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

nAB1606239294 2120737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Poker Lake Unit 78 Tank Battery	Facility Type: Exploration and Production

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

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E	660		660		Eddy

Latitude: 32.194170 **Longitude:** 103.827430

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 65 barrels PW and 54 barrels Oil	Volume Recovered: 50 barrels oil and 50 barrels PW
Source of Release: Failed HT Gasket	Date and Hour of Occurrence: 2-27-16 @ 1:00pm	Date and Hour of Discovery: 2-27-16 @ 1:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos BLM	
By Whom? Bradley Blevins via email	Date and Hour: 2-27-16 @ 2:42pm	
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.*

BOPCO EHS was notified of a release that occurred at the PLU 78 due to a failed heater treater gasket. A vacuum truck was called to the location to recover the fluid within the firewall.

Describe Area Affected and Cleanup Action Taken.*

The majority of the fluid was contained within the earth berm with the exception of a light overspray on the northern half of the location. A vacuum truck was called to the location and recovered 50 barrels of oil and 50 barrels of produced water from the firewall.

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

Signature: Bradley Blevins	OIL CONSERVATION DIVISION
Printed Name: Bradley Blevins	Approved by Environmental Specialist:
Title: Assistant Remediation Forcman	Approval Date: 3/2/16 Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: Attached ☐
Date: 3-1-16 Phone: 432-214-3704	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/2/16

* Attach Additional Sheets If Necessary

3RP-3576

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	
Facility ID	2RP-3576
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-3576
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.194170 Longitude -103.827430
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 78 Tank Battery	Site Type Exploration and Production
Date Release Discovered 2/27/2016	API# *(if applicable)* 30-015-27536

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 54	Volume Recovered (bbls) 50
☒ Produced Water	Volume Released (bbls) 65	Volume Recovered (bbls) 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A gasket failed on a heater-treater. The majority of the fluid was contained within the earthen process equipment berm, with a light overspray on the northern half of the location. A vacuum truck recovered 50 bbls of oil and 50 bbls of produced water from within the firewall.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3576
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 volume was 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 Bradley Blevins via email to Mike Bratcher/Heather Patterson (NMOCD) and Jim Amos (BLM) on 2/27/2016 at 2:42 pm.

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:
NA

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: 11/15/2019

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-3576
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3576
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: 11/15/2019

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-3576
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: 11/15/2019

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

LT Environmental, Inc.
Advancing Opportunity
25 Years

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

Identifier: BH01	Date: 8/6/19
Project Name: PLU 78	RP Number: 2RP-3576
Logged By: BB	Method: Hand Auger
Lat/Long:	Field Screening: CHLORIDES, PID.
Hole Diameter: 3.5"	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comment: [redacted]

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(SP-SM)	silty SAND, moist, brown-red, poorly graded, f., no odor.
					1			
					2			
					3			
M	<32.2 <14=<178	1.0	N	BH01A	4	4'	(SP-SM)	SAND (Same As Above) (1415)
					5			EOB@4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: BH02	Date: 8/6/19
Project Name: PLU 78	RP Number: 2RP-3576
Logged By: B.B.	Method: Hand Auger
Field Screening: CHLORIDES, PID.	Hole Diameter: 3.5" / Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(GW-GS Fill)	Gravel w/ sand, dry, lt brown-brown, well graded, fill, no odor.
					1		(SP-SM)	Silty SAND, moist, brown-red, poorly graded, f.-m., no odor.
					2			
					3			
M	<32@0.2 <47<124	1.3	N	BH02A	4	4'	(SP-SM)	SAA (Same As Above) (14:25)
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH03	8/6/19
Project Name:	**RP Number:**
PLU 78	2RP-3576
Logged By: B.B.	**Method:** Hand Auger
Hole Diameter: 3.5"	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Field Screening: CHLORIDES, PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(GW-GS fill)	Gravel w/ Sand, dry, H brown-brown, well graded, Fill, trace petro odor.
					1		(SP-SM)	silty SAND, moist, brown-red, poorly graded, f-m., trace petro odor.
					2			
					3			
M	<32@2.4 44=<172	6.3	N	BH03A	4	4'	(SP-SM)	SAA (Same As Above) (141 : 40).
					5			EOB@4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

LITHOLOGIC / SOIL SAMPLING LOG	Identifier: BH04	Date: 8/6/19
	Project Name: PLU 78	RP Number: 2RP-3576
	Logged By: BB	Method: Hand Auger
Lat/Long: / Field Screening: CHLORIDES, PID.	Hole Diameter: 3.5"	Total Depth: 4'

Comment: [redacted]

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		GW-GS (GM)	Gravel w/ Sand, dry, lt brown, well graded, fill, no odor.
					1		SP-SM	silty SAND, moist, brown - red, poorly graded, n-P, mild petro odor.
					2			
					3			
M	<32 @0.4 x4=<128	52.3	N	BH04A	4	4'	SP-SM	SAA (Same As Above) (5:00) EOB @4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

LITHOLOGIC / SOIL SAMPLING LOG	Identifier: BH05	Date: 8/6/19
	Project Name: PLU 78	RP Number: 2RP-3576
	Logged By: BB	Method: Hand Auger
Lat/Long: / Field Screening: CHLORIDES, PID	Hole Diameter: 3.5"	Total Depth: 4'

Comment [redacted]

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(GW-GS) fill	Gravel w/ Sand, dry, lt brown, well graded, fill, no odor.
M	<32@0.6 x4=<128	12.3	N	BH05	1	1'	(SP-SM)	SILTY SAND, moist, brown-red, poorly graded, f-m, no odor. (15:20)
					2			
					3			
M	<32@0.0 x4=<128	2.6	N	BH05A	4	4'	(SP-SM)	SAA (Same As Above) (15:25) EOB @4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: BH06	Date: 8/6/19
Project Name: PLU 78	RP Number: 2RP-3576
Logged By: BB	Method: Hand Auger
Hole Diameter: 3.5"	Total Depth: 4

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: CHLORIDES, PID.
Comment [redacted]

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		(GW-GS fill)	Gravel w/sand, dry, lt brown, well graded, fill, no odor.
M	<32@1:2 x4=<128	2.7	N	BH06	1	1'	(SP-SM)	silty SAND, moist, brown-red, poorly graded, m.-f., no odor, (15:35)
					2			
					3			
M	<32@0:4 x4=<128	1.0	N	BH06A	4	4'	(SP-SM)	SAA (Same As Above) (15:45) EOB @ 4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH01	Date: 8/27/2019
Project Name: PLU 78 SWD	RP Number: 2RP-3576
Logged By: BB	Method: Backhoe
Hole Diameter: NA	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CHLORIDES, PID

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CLCHE, ASH	CALICHE, dry, tan, poorly cmtd, micro xln, fill, no odor.
D	1328 (1478)	0.5	N	PH01	1	1'	SP	SAND, dry, brown-red, poorly graded, f., no odor. (12:30)
					2			
					3			
M	348 (1506)	0.0	N	PH01A	4	4'	SP	SAA (Same As Above) (12:40)
					5			EOP @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH02	8/27/2019
Project Name:	RP Number:
PLU 78 SWD	2RP- [redacted]3576
Logged By: BB	Method: Backhoe
Hole Diameter: NA	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: CHLORIDES, PID
Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		Caliche, fill	CALICHE, dry, tan, poorly consolidated, micro xtn. fill, no odor
M	@1.0 (1128)	01	N	PH02	1	1'	SP	SAND, moist, brown-red, poorly graded, f. @12:55 No odor
					2			
					3			
M	@1.4 (1128)	00	N	PH02 A	4	4'	SC	SAND, moist, brown-red, poorly graded, f. @1300 No odor
					5			EOP@4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 629539

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 78 (2RP-3576)

0129181131

09-JUL-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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)

09-JUL-19

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

Reference: XENCO Report No(s): **629539**
PLU 78 (2RP-3576)
Project Address: Delaware Basin

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 629539. 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. 629539 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 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PLU 78 BH01	S	06-26-19 14:10	1 ft	629539-001
PLU 78 BH02	S	06-26-19 14:45	1 ft	629539-002
PLU 78 BH03	S	06-26-19 15:15	1 ft	629539-003
PLU 78 BH04	S	06-26-19 16:40	1 ft	629539-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 78 (2RP-3576)

Project ID: *0129181131*
Work Order Number(s): *629539*

Report Date: *09-JUL-19*
Date Received: *06/28/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3094810 BTEX by EPA 8021B

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

Certificate of Analysis Summary 629539

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 (2RP-3576)

Project Id: 0129181131
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Fri Jun-28-19 04:25 pm
Report Date: 09-JUL-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	629539-001		629539-002		629539-003		629539-004					
	Field Id:	PLU 78 BH01		PLU 78 BH02		PLU 78 BH03		PLU 78 BH04					
	Depth:	1- ft		1- ft		1- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jun-26-19 14:10		Jun-26-19 14:45		Jun-26-19 15:15		Jun-26-19 16:40					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-08-19 11:45		Jul-08-19 11:45		Jul-08-19 11:45		Jul-08-19 11:45					
	Analyzed:	Jul-09-19 01:24		Jul-09-19 01:46		Jul-09-19 02:08		Jul-09-19 03:42					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00397	0.00397	<0.00398	0.00398	<0.00400	0.00400				
o-Xylene		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jul-01-19 16:00		Jul-01-19 16:00		Jul-01-19 16:00		Jul-01-19 16:00					
	Analyzed:	Jul-01-19 22:06		Jul-01-19 22:11		Jul-01-19 22:26		Jul-01-19 22:31					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		23.5	5.05	34.9	5.01	28.8	4.98	<5.03	5.03				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jul-04-19 10:00		Jul-04-19 10:00		Jul-04-19 10:00		Jul-04-19 10:00					
	Analyzed:	Jul-04-19 23:55		Jul-05-19 00:20		Jul-05-19 00:45		Jul-05-19 01:10					
	Units/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				
Diesel Range Organics (DRO)		<14.9	14.9	427	15.0	571	15.0	151	15.0				
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	102	15.0	72.5	15.0	42.3	15.0				
Total TPH		<14.9	14.9	529	15.0	644	15.0	193	15.0				
Total GRO-DRO		<14.9	14.9	427	15.0	571	15.0	151	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 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH01**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-001	Date Collected:	06.26.19 14.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.01.19 16.00	Basis:	Wet Weight
Seq Number:	3094160			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.5**	5.05	mg/kg	07.01.19 22.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.04.19 10.00	Basis:	Wet Weight
Seq Number:	3094461			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.04.19 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.04.19 23.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	07.04.19 23.55	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.04.19 23.55	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	07.04.19 23.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	07.04.19 23.55	
o-Terphenyl	84-15-1	84	%	70-135	07.04.19 23.55	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH01**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-001	Date Collected:	06.26.19 14.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	07.08.19 11.45	Basis:	Wet Weight
Seq Number:	3094810			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.09.19 01.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.09.19 01.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.09.19 01.24	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.09.19 01.24	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH02**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-002	Date Collected:	06.26.19 14.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.01.19 16.00	Basis:	Wet Weight
Seq Number:	3094160			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.9**	5.01	mg/kg	07.01.19 22.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.04.19 10.00	Basis:	Wet Weight
Seq Number:	3094461			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.19 00.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**427**	15.0	mg/kg	07.05.19 00.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**102**	15.0	mg/kg	07.05.19 00.20		1
Total TPH	PHC635	**529**	15.0	mg/kg	07.05.19 00.20		1
Total GRO-DRO	PHC628	**427**	15.0	mg/kg	07.05.19 00.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.05.19 00.20	
o-Terphenyl	84-15-1	84	%	70-135	07.05.19 00.20	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH02**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-002	Date Collected:	06.26.19 14.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	07.08.19 11.45	Basis:	Wet Weight
Seq Number:	3094810			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.09.19 01.46	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.09.19 01.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.09.19 01.46	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.09.19 01.46	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH03**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-003	Date Collected:	06.26.19 15.15	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.01.19 16.00	Basis:	Wet Weight
Seq Number:	3094160			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.8**	4.98	mg/kg	07.01.19 22.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.04.19 10.00	Basis:	Wet Weight
Seq Number:	3094461			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.19 00.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**571**	15.0	mg/kg	07.05.19 00.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**72.5**	15.0	mg/kg	07.05.19 00.45		1
Total TPH	PHC635	**644**	15.0	mg/kg	07.05.19 00.45		1
Total GRO-DRO	PHC628	**571**	15.0	mg/kg	07.05.19 00.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.05.19 00.45	
o-Terphenyl	84-15-1	85	%	70-135	07.05.19 00.45	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH03**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-003	Date Collected:	06.26.19 15.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	07.08.19 11.45	Basis:	Wet Weight
Seq Number:	3094810			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.09.19 02.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.09.19 02.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.09.19 02.08	
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.09.19 02.08	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH04**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-004	Date Collected:	06.26.19 16.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.01.19 16.00	Basis:	Wet Weight
Seq Number:	3094160			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	07.01.19 22.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.04.19 10.00	Basis:	Wet Weight
Seq Number:	3094461			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.19 01.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**151**	15.0	mg/kg	07.05.19 01.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**42.3**	15.0	mg/kg	07.05.19 01.10		1
Total TPH	PHC635	**193**	15.0	mg/kg	07.05.19 01.10		1
Total GRO-DRO	PHC628	**151**	15.0	mg/kg	07.05.19 01.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.05.19 01.10	
o-Terphenyl	84-15-1	78	%	70-135	07.05.19 01.10	

Certificate of Analytical Results 629539

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**PLU 78 BH04**	Matrix:	Soil	Date Received:	06.28.19 16.25
Lab Sample Id:	629539-004	Date Collected:	06.26.19 16.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	FOV	Date Prep:	07.08.19 11.45	Basis:	Wet Weight
Seq Number:	3094810			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.09.19 03.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.09.19 03.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.09.19 03.42	
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.09.19 03.42	

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 629539

LT Environmental, Inc.

PLU 78 (2RP-3576)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3094160 Matrix: Solid Date Prep: 07.01.19
MB Sample Id: 7681162-1-BLK LCS Sample Id: 7681162-1-BKS LCSD Sample Id: 7681162-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	250	100	251	100	90-110	0	20	mg/kg	07.01.19 21:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3094160 Matrix: Soil Date Prep: 07.01.19
Parent Sample Id: 629503-013 MS Sample Id: 629503-013 S MSD Sample Id: 629503-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	107	248	368	105	367	105	90-110	0	20	mg/kg	07.01.19 21:47	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3094160 Matrix: Soil Date Prep: 07.01.19
Parent Sample Id: 629609-003 MS Sample Id: 629609-003 S MSD Sample Id: 629609-003 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	690	96	686	94	90-110	1	20	mg/kg	07.01.19 22:55	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3094461 Matrix: Solid Date Prep: 07.04.19
MB Sample Id: 7681387-1-BLK LCS Sample Id: 7681387-1-BKS LCSD Sample Id: 7681387-1-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	1180	118	1100	110	70-135	7	20	mg/kg	07.04.19 21:09	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	1150	115	70-135	3	20	mg/kg	07.04.19 21:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		111		103		70-135	%	07.04.19 21:09
o-Terphenyl	83		110		97		70-135	%	07.04.19 21:09

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 629539

LT Environmental, Inc.

PLU 78 (2RP-3576)

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3094461 | Matrix: Soil | Date Prep: 07.04.19
Parent Sample Id: 629498-001 | MS Sample Id: 629498-001 S | MSD Sample Id: 629498-001 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)	9.21	997	1180	117	1190	118	70-135	1	20	mg/kg	07.04.19 22:20	
Diesel Range Organics (DRO)	13.6	997	1080	107	1050	104	70-135	3	20	mg/kg	07.04.19 22:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		102		70-135	%	07.04.19 22:20
o-Terphenyl	79		76		70-135	%	07.04.19 22:20

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3094810 | Matrix: Solid | Date Prep: 07.08.19
MB Sample Id: 7681533-1-BLK | LCS Sample Id: 7681533-1-BKS | LCSD Sample Id: 7681533-1-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	0.0919	92	0.0879	88	70-130	4	35	mg/kg	07.08.19 08:34	
Toluene	<0.00200	0.0998	0.0899	90	0.0873	88	70-130	3	35	mg/kg	07.08.19 08:34	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.0952	96	70-130	6	35	mg/kg	07.08.19 08:34	
m,p-Xylenes	<0.00399	0.200	0.201	101	0.191	96	70-130	5	35	mg/kg	07.08.19 08:34	
o-Xylene	<0.00200	0.0998	0.0960	96	0.0914	92	70-130	5	35	mg/kg	07.08.19 08:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		93		93		70-130	%	07.08.19 08:34
4-Bromofluorobenzene	95		106		103		70-130	%	07.08.19 08:34

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3094810 | Matrix: Soil | Date Prep: 07.08.19
Parent Sample Id: 629496-023 | MS Sample Id: 629496-023 S | MSD Sample Id: 629496-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0823	83	0.0834	83	70-130	1	35	mg/kg	07.08.19 09:18	
Toluene	<0.00199	0.0996	0.0820	82	0.0796	80	70-130	3	35	mg/kg	07.08.19 09:18	
Ethylbenzene	<0.00199	0.0996	0.0912	92	0.0897	90	70-130	2	35	mg/kg	07.08.19 09:18	
m,p-Xylenes	<0.00398	0.199	0.181	91	0.180	90	70-130	1	35	mg/kg	07.08.19 09:18	
o-Xylene	<0.00199	0.0996	0.0872	88	0.0884	88	70-130	1	35	mg/kg	07.08.19 09:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		70-130	%	07.08.19 09:18
4-Bromofluorobenzene	119		120		70-130	%	07.08.19 09:18

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

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

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

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

Chain of Custody

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 629539

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 Green Street
City, State ZIP:	Midland, Texas, 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	432.236.3849 Email:		Slo@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 78 (2RP-3576)	Turn Around	
Project Number:	01291831	Routine	☒
Project Location		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	
PO #:	Quote #:		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Temperature (°C):	1.3	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8260)	Chloride (EPA 300.0)	Sample Comments
	PLU 78 BH01	S	6/26/19	1410	1'	1	X	X	X	
	PLU 78 BH02	S	6/26/19	1445	1'	1	X	X	X	
	PLU 78 BH03	S	6/26/19	1515	1'	1	X	X	X	
	PLU 78 BH04	S	6/26/19	1540	1'	1	X	X	X	

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	Spencer Lo	Courtney	6/28/19 16:25	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number **42588**

Date/Time: 06/28/19 17:36
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
629539-001	S	PLU 78 BH01	06/26/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07/05/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629539-001	S	PLU 78 BH01	06/26/19 14:10	SW8021B	BTEX by EPA 8021B	07/05/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629539-001	S	PLU 78 BH01	06/26/19 14:10	E300_CL	Chloride by EPA 300	07/05/19	12/23/19	JKR	CL	
629539-002	S	PLU 78 BH02	06/26/19 14:45	SW8021B	BTEX by EPA 8021B	07/05/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629539-002	S	PLU 78 BH02	06/26/19 14:45	SW8015MOD_NM	TPH by SW8015 Mod	07/05/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629539-002	S	PLU 78 BH02	06/26/19 14:45	E300_CL	Chloride by EPA 300	07/05/19	12/23/19	JKR	CL	
629539-003	S	PLU 78 BH03	06/26/19 15:15	SW8021B	BTEX by EPA 8021B	07/05/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629539-003	S	PLU 78 BH03	06/26/19 15:15	SW8015MOD_NM	TPH by SW8015 Mod	07/05/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629539-003	S	PLU 78 BH03	06/26/19 15:15	E300_CL	Chloride by EPA 300	07/05/19	12/23/19	JKR	CL	
629539-004	S	PLU 78 BH04	06/26/19 16:40	SW8021B	BTEX by EPA 8021B	07/05/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629539-004	S	PLU 78 BH04	06/26/19 16:40	E300_CL	Chloride by EPA 300	07/05/19	12/23/19	JKR	CL	
629539-004	S	PLU 78 BH04	06/26/19 16:40	SW8015MOD_NM	TPH by SW8015 Mod	07/05/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan
Date Relinquished: 06/28/2019

Received By: Brianna Teel
Date Received: 07/01/2019 07:26
Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 42588

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 06/28/2019 05:36 PM

Received By: Brianna Teel **Date Received:** 07/01/2019 07:26 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 07/01/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/28/2019 04:25:00 PM

Work Order #: 629539

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	13	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	Chilling in progress.
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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)?	**Yes**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 06/28/2019

Checklist reviewed by: Jessica Kramer Date: 07/02/2019

Jessica Kramer

Analytical Report 633342

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 78 (2RP-3576)

012919131

13-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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)

13-AUG-19

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

Reference: XENCO Report No(s): **633342**
PLU 78 (2RP-3576)
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 633342. 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. 633342 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 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01A	S	08-06-19 14:15	4 ft	633342-001
BH02A	S	08-06-19 14:25	4 ft	633342-002
BH03A	S	08-06-19 14:40	4 ft	633342-003
BH04A	S	08-06-19 15:00	4 ft	633342-004
BH05	S	08-06-19 15:20	1 ft	633342-005
BH05A	S	08-06-19 15:25	4 ft	633342-006
BH06	S	08-06-19 15:35	1 ft	633342-007
BH06A	S	08-06-19 15:45	4 ft	633342-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 78 (2RP-3576)

Project ID: *012919131*
Work Order Number(s): *633342*

Report Date: *13-AUG-19*
Date Received: *08/07/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098397 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 633342-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
m,p-Xylenes recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 633342-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for m,p-Xylenes is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 633342

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 (2RP-3576)

Project Id: 012919131
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Aug-07-19 01:45 pm
Report Date: 13-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	633342-001		633342-002		633342-003		633342-004		633342-005		633342-006	
	Field Id:	BH01A		BH02A		BH03A		BH04A		BH05		BH05A	
	Depth:	4- ft		4- ft		4- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-06-19 14:15		Aug-06-19 14:25		Aug-06-19 14:40		Aug-06-19 15:00		Aug-06-19 15:20		Aug-06-19 15:25	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-10-19 11:30		Aug-10-19 11:30		Aug-10-19 11:30		Aug-10-19 11:30		Aug-10-19 11:30		Aug-10-19 11:30	
	Analyzed:	Aug-13-19 00:47		Aug-13-19 01:07		Aug-13-19 01:27		Aug-13-19 01:47		Aug-13-19 02:07		Aug-13-19 02:27	
	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	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00	
	Analyzed:	Aug-08-19 19:40		Aug-08-19 19:59		Aug-08-19 20:05		Aug-08-19 20:12		Aug-08-19 20:18		Aug-08-19 20:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		24.3	5.02	36.3	5.04	13.3	5.01	11.2	4.98	101	4.99	27.2	5.00
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-12-19 12:00		Aug-12-19 12:00		Aug-12-19 12:00		Aug-09-19 15:00		Aug-09-19 15:00		Aug-09-19 15:00	
	Analyzed:	Aug-13-19 05:52		Aug-13-19 06:11		Aug-13-19 06:29		Aug-11-19 08:21		Aug-11-19 08:41		Aug-11-19 08:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		346	15.0	<14.9	14.9	492	15.0	<15.0	15.0	2740	15.0	24.9	15.0
Motor Oil Range Hydrocarbons (MRO)		61.4	15.0	<14.9	14.9	74.4	15.0	<15.0	15.0	510	15.0	<15.0	15.0
Total TPH		407	15.0	<14.9	14.9	566	15.0	<15.0	15.0	3250	15.0	24.9	15.0
Total GRO-DRO		346	15.0	<14.9	14.9	492	15.0	<15.0	15.0	2740	15.0	24.9	15.0

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 633342

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 (2RP-3576)

Project Id: 012919131
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Aug-07-19 01:45 pm
Report Date: 13-AUG-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	633342-007		633342-008					
	Field Id:	BH06		BH06A					
	Depth:	1- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-06-19 15:35		Aug-06-19 15:45					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-10-19 11:30		Aug-10-19 11:30					
	Analyzed:	Aug-13-19 02:48		Aug-13-19 03:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00198	0.00198				
Toluene		<0.00199	0.00199	<0.00198	0.00198				
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198				
m,p-Xylenes		<0.00398	0.00398	<0.00396	0.00396				
o-Xylene		<0.00199	0.00199	<0.00198	0.00198				
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198				
Total BTEX		<0.00199	0.00199	<0.00198	0.00198				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-08-19 15:00		Aug-08-19 15:40					
	Analyzed:	Aug-08-19 20:31		Aug-09-19 09:30					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		84.1	5.00	34.9	4.99				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-09-19 15:00		Aug-09-19 15:00					
	Analyzed:	Aug-11-19 09:18		Aug-11-19 09:37					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		281	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		150	15.0	<15.0	15.0				
Total TPH		431	15.0	<15.0	15.0				
Total GRO-DRO		281	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 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-001	Date Collected:	08.06.19 14.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.3**	5.02	mg/kg	08.08.19 19.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.12.19 12.00	Basis:	Wet Weight
Seq Number:	3098276			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.13.19 05.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**346**	15.0	mg/kg	08.13.19 05.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**61.4**	15.0	mg/kg	08.13.19 05.52		1
Total TPH	PHC635	**407**	15.0	mg/kg	08.13.19 05.52		1
Total GRO-DRO	PHC628	**346**	15.0	mg/kg	08.13.19 05.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.13.19 05.52	
o-Terphenyl	84-15-1	94	%	70-135	08.13.19 05.52	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-001	Date Collected:	08.06.19 14.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.13.19 00.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.19 00.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.13.19 00.47	
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.13.19 00.47	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-002	Date Collected:	08.06.19 14.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.3**	5.04	mg/kg	08.08.19 19.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.12.19 12.00	Basis:	Wet Weight
Seq Number:	3098276			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.13.19 06.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.13.19 06.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.13.19 06.11	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.13.19 06.11	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.13.19 06.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.13.19 06.11	
o-Terphenyl	84-15-1	96	%	70-135	08.13.19 06.11	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-002	Date Collected:	08.06.19 14.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.19 01.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.19 01.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.13.19 01.07	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.19 01.07	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id: **BH03A** Matrix: Soil Date Received:08.07.19 13.45
Lab Sample Id: 633342-003 Date Collected: 08.06.19 14.40 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.3**	5.01	mg/kg	08.08.19 20.05		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.12.19 12.00 Basis: Wet Weight
Seq Number: 3098276 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.13.19 06.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	**492**	15.0	mg/kg	08.13.19 06.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.4**	15.0	mg/kg	08.13.19 06.29		1
Total TPH	PHC635	**566**	15.0	mg/kg	08.13.19 06.29		1
Total GRO-DRO	PHC628	**492**	15.0	mg/kg	08.13.19 06.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.13.19 06.29	
o-Terphenyl	84-15-1	97	%	70-135	08.13.19 06.29	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-003	Date Collected:	08.06.19 14.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.19 01.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.19 01.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.13.19 01.27	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.13.19 01.27	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-004	Date Collected:	08.06.19 15.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.2**	4.98	mg/kg	08.08.19 20.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 08.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.11.19 08.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 08.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.11.19 08.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.11.19 08.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.11.19 08.21	
o-Terphenyl	84-15-1	95	%	70-135	08.11.19 08.21	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-004	Date Collected:	08.06.19 15.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.19 01.47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.19 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.13.19 01.47	
1,4-Difluorobenzene	540-36-3	80	%	70-130	08.13.19 01.47	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-005	Date Collected:	08.06.19 15.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	4.99	mg/kg	08.08.19 20.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 08.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**2740**	15.0	mg/kg	08.11.19 08.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**510**	15.0	mg/kg	08.11.19 08.41		1
Total TPH	PHC635	**3250**	15.0	mg/kg	08.11.19 08.41		1
Total GRO-DRO	PHC628	**2740**	15.0	mg/kg	08.11.19 08.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.11.19 08.41	
o-Terphenyl	84-15-1	114	%	70-135	08.11.19 08.41	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-005	Date Collected:	08.06.19 15.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.19 02.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.19 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.13.19 02.07	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.19 02.07	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-006	Date Collected:	08.06.19 15.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.2**	5.00	mg/kg	08.08.19 20.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 08.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**24.9**	15.0	mg/kg	08.11.19 08.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 08.59	U	1
Total TPH	PHC635	**24.9**	15.0	mg/kg	08.11.19 08.59		1
Total GRO-DRO	PHC628	**24.9**	15.0	mg/kg	08.11.19 08.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.11.19 08.59	
o-Terphenyl	84-15-1	92	%	70-135	08.11.19 08.59	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-006	Date Collected:	08.06.19 15.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.13.19 02.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.19 02.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.13.19 02.27	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.13.19 02.27	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-007	Date Collected:	08.06.19 15.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.1**	5.00	mg/kg	08.08.19 20.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 09.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**281**	15.0	mg/kg	08.11.19 09.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**150**	15.0	mg/kg	08.11.19 09.18		1
Total TPH	PHC635	**431**	15.0	mg/kg	08.11.19 09.18		1
Total GRO-DRO	PHC628	**281**	15.0	mg/kg	08.11.19 09.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.11.19 09.18	
o-Terphenyl	84-15-1	101	%	70-135	08.11.19 09.18	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-007	Date Collected:	08.06.19 15.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.19 02.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.19 02.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.13.19 02.48	
1,4-Difluorobenzene	540-36-3	86	%	70-130	08.13.19 02.48	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-008	Date Collected:	08.06.19 15.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.40	Basis:	Wet Weight
Seq Number:	3098041			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.9**	4.99	mg/kg	08.09.19 09.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 09.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.11.19 09.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 09.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.11.19 09.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.11.19 09.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.11.19 09.37	
o-Terphenyl	84-15-1	103	%	70-135	08.11.19 09.37	

Certificate of Analytical Results 633342

LT Environmental, Inc., Arvada, CO

PLU 78 (2RP-3576)

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	08.07.19 13.45
Lab Sample Id:	633342-008	Date Collected:	08.06.19 15.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.10.19 11.30	Basis:	Wet Weight
Seq Number:	3098397			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.13.19 03.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.19 03.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.13.19 03.08	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.13.19 03.08	

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 633342

LT Environmental, Inc.

PLU 78 (2RP-3576)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3097992 — Matrix: Solid — Date Prep: 08.08.19
MB Sample Id: 7683833-1-BLK — LCS Sample Id: 7683833-1-BKS — LCSD Sample Id: 7683833-1-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	252	101	251	100	90-110	0	20	mg/kg	08.08.19 17:34	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3098041 — Matrix: Solid — Date Prep: 08.08.19
MB Sample Id: 7683837-1-BLK — LCS Sample Id: 7683837-1-BKS — LCSD Sample Id: 7683837-1-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	248	99	249	100	90-110	0	20	mg/kg	08.09.19 05:45	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3097992 — Matrix: Soil — Date Prep: 08.08.19
Parent Sample Id: 633270-002 — MS Sample Id: 633270-002 S — MSD Sample Id: 633270-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	140	252	395	101	395	101	90-110	0	20	mg/kg	08.08.19 17:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3097992 — Matrix: Soil — Date Prep: 08.08.19
Parent Sample Id: 633270-012 — MS Sample Id: 633270-012 S — MSD Sample Id: 633270-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	249	404	104	403	104	90-110	0	20	mg/kg	08.08.19 19:21	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3098041 — Matrix: Soil — Date Prep: 08.08.19
Parent Sample Id: 633355-025 — MS Sample Id: 633355-025 S — MSD Sample Id: 633355-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	250	1450	88	1450	88	90-110	0	20	mg/kg	08.09.19 06:03	X

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 633342

LT Environmental, Inc.

PLU 78 (2RP-3576)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098041 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633355-035 MS Sample Id: 633355-035 S MSD Sample Id: 633355-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	176	253	437	103	432	101	90-110	1	20	mg/kg	08.09.19 07:27	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Solid Date Prep: 08.09.19
MB Sample Id: 7683942-1-BLK LCS Sample Id: 7683942-1-BKS LCSD Sample Id: 7683942-1-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	1100	110	1130	113	70-135	3	20	mg/kg	08.11.19 02:06	
Diesel Range Organics (DRO)	<8.13	1000	993	99	1030	103	70-135	4	20	mg/kg	08.11.19 02:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		120		124		70-135	%	08.11.19 02:06
o-Terphenyl	91		98		107		70-135	%	08.11.19 02:06

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098276 Matrix: Solid Date Prep: 08.12.19
MB Sample Id: 7684045-1-BLK LCS Sample Id: 7684045-1-BKS LCSD Sample Id: 7684045-1-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	1080	108	70-135	1	20	mg/kg	08.12.19 23:36	
Diesel Range Organics (DRO)	<8.13	1000	964	96	972	97	70-135	1	20	mg/kg	08.12.19 23:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		119		118		70-135	%	08.12.19 23:36
o-Terphenyl	98		102		103		70-135	%	08.12.19 23:36

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Soil Date Prep: 08.09.19
Parent Sample Id: 633251-001 MS Sample Id: 633251-001 S MSD Sample Id: 633251-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1190	119	1150	115	70-135	3	20	mg/kg	08.11.19 03:02	
Diesel Range Organics (DRO)	<8.10	997	1150	115	1170	117	70-135	2	20	mg/kg	08.11.19 03:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		126		70-135	%	08.11.19 03:02
o-Terphenyl	116		118		70-135	%	08.11.19 03:02

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 633342

LT Environmental, Inc.

PLU 78 (2RP-3576)

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3098276 | Matrix: Soil | Date Prep: 08.12.19
Parent Sample Id: 633267-001 | MS Sample Id: 633267-001 S | MSD Sample Id: 633267-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1080	108	1080	108	70-135	0	20	mg/kg	08.13.19 00:32	
Diesel Range Organics (DRO)	<8.12	999	979	98	987	99	70-135	1	20	mg/kg	08.13.19 00:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		115		70-135	%	08.13.19 00:32
o-Terphenyl	99		101		70-135	%	08.13.19 00:32

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3098397 | Matrix: Solid | Date Prep: 08.10.19
MB Sample Id: 7684033-1-BLK | LCS Sample Id: 7684033-1-BKS | LCSD Sample Id: 7684033-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.101	101	0.0874	87	70-130	14	35	mg/kg	08.12.19 18:05	
Toluene	0.000680	0.100	0.0908	91	0.0804	80	70-130	12	35	mg/kg	08.12.19 18:05	
Ethylbenzene	<0.00200	0.100	0.0911	91	0.0805	81	70-130	12	35	mg/kg	08.12.19 18:05	
m,p-Xylenes	<0.00101	0.200	0.181	91	0.162	81	70-130	11	35	mg/kg	08.12.19 18:05	
o-Xylene	<0.000344	0.100	0.0942	94	0.0851	85	70-130	10	35	mg/kg	08.12.19 18:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		105		103		70-130	%	08.12.19 18:05
4-Bromofluorobenzene	103		106		105		70-130	%	08.12.19 18:05

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3098397 | Matrix: Soil | Date Prep: 08.10.19
Parent Sample Id: 633342-001 | MS Sample Id: 633342-001 S | MSD Sample Id: 633342-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0886	89	0.0963	96	70-130	8	35	mg/kg	08.12.19 19:08	
Toluene	<0.000456	0.100	0.0764	76	0.0827	83	70-130	8	35	mg/kg	08.12.19 19:08	
Ethylbenzene	<0.00200	0.100	0.0696	70	0.0749	75	70-130	7	35	mg/kg	08.12.19 19:08	
m,p-Xylenes	<0.00101	0.200	0.137	69	0.147	74	70-130	7	35	mg/kg	08.12.19 19:08	X
o-Xylene	<0.00200	0.100	0.0701	70	0.0757	76	70-130	8	35	mg/kg	08.12.19 19:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	08.12.19 19:08
4-Bromofluorobenzene	105		109		70-130	%	08.12.19 19:08

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

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

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

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

Chain of Custody

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: 633342

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

		Turn Around	
Project Name:	PLU 78 (2RP-3576)	Routine	☒
Project Number:	012918131	Rush:	
P.O. Number:			
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT

Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.6	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	~~Yes~~ (No) N/A	Correction Factor:	8
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8

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
BH01A	S	8/6/19	14:15	4'	1	X	X	X	
BH02A	↓	↓	14:25	4	↓	X	X	X	
BH03A	↓	↓	14:40	4	↓	X	X	X	
BH04 A	↓	↓	15:00	4	↓	X	X	X	
BH05	↓	↓	15:20	1'	↓	X	X	X	
BH05A	↓	↓	15:25	4'	↓	X	X	X	
BH06	↓	↓	15:35	1'	↓	X	X	X	
BH06A	↓	↓	15:45	4'	↓	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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]	[signature]	8/7/19 13:45	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **45791**

Date/Time: 08/07/19 15:03
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.: 7759305855567
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
633342-001	S	BH01A	08/06/19 14:15	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-001	S	BH01A	08/06/19 14:15	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-001	S	BH01A	08/06/19 14:15	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-002	S	BH02A	08/06/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-002	S	BH02A	08/06/19 14:25	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-002	S	BH02A	08/06/19 14:25	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-003	S	BH03A	08/06/19 14:40	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-003	S	BH03A	08/06/19 14:40	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-003	S	BH03A	08/06/19 14:40	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-004	S	BH04A	08/06/19 15:00	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-004	S	BH04A	08/06/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-004	S	BH04A	08/06/19 15:00	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-005	S	BH05	08/06/19 15:20	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-005	S	BH05	08/06/19 15:20	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-005	S	BH05	08/06/19 15:20	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-006	S	BH05A	08/06/19 15:25	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-006	S	BH05A	08/06/19 15:25	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-006	S	BH05A	08/06/19 15:25	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-007	S	BH06	08/06/19 15:35	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-007	S	BH06	08/06/19 15:35	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-007	S	BH06	08/06/19 15:35	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	
633342-008	S	BH06A	08/06/19 15:45	SW8021B	BTEX by EPA 8021B	08/13/19	08/20/19	JKR	BR4FBZ BZ BZME EBZ X	
633342-008	S	BH06A	08/06/19 15:45	E300_CL	Chloride by EPA 300	08/13/19	02/02/20	JKR	CL	
633342-008	S	BH06A	08/06/19 15:45	SW8015MOD_NM	TPH by SW8015 Mod	08/13/19	08/20/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **45791**

Date/Time: 08/07/19 15:03
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7759305855567

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/07/2019

Received By: Brianna Teel

Date Received: 08/08/2019 11:05

Cooler Temperature: 0.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 45791

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 08/07/2019 03:03 PM

Received By: Brianna Teel **Date Received:** 08/08/2019 11:05 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 08/08/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/07/2019 01:45:00 PM

Work Order #: 633342

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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)?	**Yes**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/07/2019

Checklist reviewed by: Jessica Kramer Date: 08/09/2019

Jessica Kramer

Analytical Report 635303

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 78 SWD (2RP-3576)

012918131

08-NOV-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

08-NOV-19

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

Reference: XENCO Report No(s): **635303**
PLU 78 SWD (2RP-3576)
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 635303. 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. 635303 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 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	08-27-19 12:30	1 ft	635303-001
PH01A	S	08-27-19 12:40	4 ft	635303-002
PH02	S	08-27-19 12:55	1 ft	635303-003
PH02A	S	08-27-19 13:00	4 ft	635303-004
FS01	S	08-27-19 16:15	2 ft	635303-005
FS02	S	08-27-19 16:20	2 ft	635303-006
SW01	S	08-27-19 16:25	0 - 2 ft	635303-007
SW02	S	08-27-19 16:30	0 - 2 ft	635303-008
SW03	S	08-27-19 16:35	0 - 2 ft	635303-009
SW04	S	08-27-19 16:40	0 - 2 ft	635303-010

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 78 SWD (2RP-3576)

Project ID:	*012918131*	Report Date:	*08-NOV-19*
Work Order Number(s):	*635303*	Date Received:	*08/28/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100245 BTEX by EPA 8021B

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

Certificate of Analysis Summary 635303

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 SWD (2RP-3576)

Project Id: 012918131
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Aug-28-19 08:45 am
Report Date: 08-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635303-001		635303-002		635303-003		635303-004		635303-005		635303-006	
	Field Id:	PH01		PH01A		PH02		PH02A		FS01		FS02	
	Depth:	1- ft		4- ft		1- ft		4- ft		2- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-27-19 12:30		Aug-27-19 12:40		Aug-27-19 12:55		Aug-27-19 13:00		Aug-27-19 16:15		Aug-27-19 16:20	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00	
	Analyzed:	Aug-30-19 10:47		Aug-30-19 11:07		Aug-30-19 11:27		Aug-30-19 11:47		Aug-30-19 12:08		Aug-30-19 12:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00396	0.00396	<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30	
	Analyzed:	Aug-30-19 11:53		Aug-30-19 11:58		Aug-30-19 12:04		Aug-30-19 12:09		Aug-30-19 12:15		Aug-30-19 12:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		153	5.05	202	4.98	85.3	4.95	143	5.02	225	5.00	144	5.04
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00	
	Analyzed:	Aug-29-19 17:25		Aug-29-19 18:23		Aug-29-19 18:42		Aug-29-19 19:01		Sep-06-19 00:03		Aug-29-19 19:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0	<50.0	50.0	<25.0	25.0
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0	875	50.0	160	25.0
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0	163	50.0	32.9	25.0
Total GRO-DRO		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0	875	50.0	160	25.0
Total TPH		<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0	1040	50.0	193	25.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 635303

LT Environmental, Inc., Arvada, CO

Project Name: PLU 78 SWD (2RP-3576)

Project Id: 012918131
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Aug-28-19 08:45 am
Report Date: 08-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635303-007		635303-008		635303-009		635303-010					
	Field Id:	SW01		SW02		SW03		SW04					
	Depth:	0-2 ft		0-2 ft		0-2 ft		0-2 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-27-19 16:25		Aug-27-19 16:30		Aug-27-19 16:35		Aug-27-19 16:40					
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00		Aug-29-19 15:00					
	Analyzed:	Aug-30-19 12:48		Aug-30-19 13:08		Aug-30-19 13:28		Aug-30-19 13:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		<0.00404	0.00404	<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201				
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30		Aug-30-19 10:30					
	Analyzed:	Aug-30-19 12:37		Aug-30-19 12:53		Aug-30-19 12:58		Aug-30-19 13:04					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		10.3	4.96	139	5.00	28.0	4.99	195	4.97				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00		Aug-29-19 14:00					
	Analyzed:	Aug-29-19 19:59		Aug-29-19 20:18		Aug-29-19 20:37		Aug-29-19 20:57					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9				
Diesel Range Organics (DRO)		389	24.9	<25.0	25.0	<25.0	25.0	704	24.9				
Motor Oil Range Hydrocarbons (MRO)		85.3	24.9	<25.0	25.0	<25.0	25.0	149	24.9				
Total GRO-DRO		389	24.9	<25.0	25.0	<25.0	25.0	704	24.9				
Total TPH		474	24.9	<25.0	25.0	<25.0	25.0	853	24.9				

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-001	Date Collected:	08.27.19 12.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**153**	5.05	mg/kg	08.30.19 11.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.29.19 17.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.29.19 17.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.29.19 17.25	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.29.19 17.25	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.29.19 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.29.19 17.25	
o-Terphenyl	84-15-1	86	%	70-135	08.29.19 17.25	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-001	Date Collected:	08.27.19 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.30.19 10.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.30.19 10.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.30.19 10.47	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.30.19 10.47	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-002	Date Collected:	08.27.19 12.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**202**	4.98	mg/kg	08.30.19 11.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 18.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.29.19 18.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.29.19 18.23	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.29.19 18.23	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.29.19 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.29.19 18.23	
o-Terphenyl	84-15-1	91	%	70-135	08.29.19 18.23	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-002	Date Collected:	08.27.19 12.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.30.19 11.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.30.19 11.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.30.19 11.07	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.30.19 11.07	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-003	Date Collected:	08.27.19 12.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.3**	4.95	mg/kg	08.30.19 12.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 18.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.29.19 18.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.29.19 18.42	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.29.19 18.42	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.29.19 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.29.19 18.42	
o-Terphenyl	84-15-1	96	%	70-135	08.29.19 18.42	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-003	Date Collected:	08.27.19 12.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.30.19 11.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.30.19 11.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.30.19 11.27	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.30.19 11.27	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id: **PH02A** Matrix: Soil Date Received:08.28.19 08.45
Lab Sample Id: 635303-004 Date Collected: 08.27.19 13.00 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.30.19 10.30 Basis: Wet Weight
Seq Number: 3100248 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**143**	5.02	mg/kg	08.30.19 12.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.29.19 14.00 Basis: Wet Weight
Seq Number: 3100186 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 19.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.29.19 19.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.29.19 19.01	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.29.19 19.01	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.29.19 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.29.19 19.01	
o-Terphenyl	84-15-1	96	%	70-135	08.29.19 19.01	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-004	Date Collected:	08.27.19 13.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.30.19 11.47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.30.19 11.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.30.19 11.47	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.30.19 11.47	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-005	Date Collected:	08.27.19 16.15	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**225**	5.00	mg/kg	08.30.19 12.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.06.19 00.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**875**	50.0	mg/kg	09.06.19 00.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**163**	50.0	mg/kg	09.06.19 00.03		1
Total GRO-DRO	PHC628	**875**	50.0	mg/kg	09.06.19 00.03		1
Total TPH	PHC635	**1040**	50.0	mg/kg	09.06.19 00.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.06.19 00.03	
o-Terphenyl	84-15-1	110	%	70-135	09.06.19 00.03	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-005	Date Collected:	08.27.19 16.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.30.19 12.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.30.19 12.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.30.19 12.08	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.30.19 12.08	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-006	Date Collected:	08.27.19 16.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**144**	5.04	mg/kg	08.30.19 12.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 19.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**160**	25.0	mg/kg	08.29.19 19.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**32.9**	25.0	mg/kg	08.29.19 19.40		1
Total GRO-DRO	PHC628	**160**	25.0	mg/kg	08.29.19 19.40		1
Total TPH	PHC635	**193**	25.0	mg/kg	08.29.19 19.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.29.19 19.40	
o-Terphenyl	84-15-1	96	%	70-135	08.29.19 19.40	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-006	Date Collected:	08.27.19 16.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.30.19 12.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.30.19 12.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.30.19 12.28	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.30.19 12.28	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-007	Date Collected:	08.27.19 16.25	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.3**	4.96	mg/kg	08.30.19 12.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.29.19 19.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	**389**	24.9	mg/kg	08.29.19 19.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**85.3**	24.9	mg/kg	08.29.19 19.59		1
Total GRO-DRO	PHC628	**389**	24.9	mg/kg	08.29.19 19.59		1
Total TPH	PHC635	**474**	24.9	mg/kg	08.29.19 19.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.29.19 19.59	
o-Terphenyl	84-15-1	99	%	70-135	08.29.19 19.59	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-007	Date Collected:	08.27.19 16.25	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.30.19 12.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.30.19 12.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.30.19 12.48	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.30.19 12.48	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-008	Date Collected:	08.27.19 16.30	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**139**	5.00	mg/kg	08.30.19 12.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 20.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.29.19 20.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.29.19 20.18	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.29.19 20.18	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.29.19 20.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.29.19 20.18	
o-Terphenyl	84-15-1	92	%	70-135	08.29.19 20.18	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-008	Date Collected:	08.27.19 16.30	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.30.19 13.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.30.19 13.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.30.19 13.08	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.30.19 13.08	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-009	Date Collected:	08.27.19 16.35	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.0**	4.99	mg/kg	08.30.19 12.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.29.19 20.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.29.19 20.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.29.19 20.37	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.29.19 20.37	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.29.19 20.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.29.19 20.37	
o-Terphenyl	84-15-1	93	%	70-135	08.29.19 20.37	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-009	Date Collected:	08.27.19 16.35	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.30.19 13.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.30.19 13.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.30.19 13.28	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.30.19 13.28	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-010	Date Collected:	08.27.19 16.40	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 10.30	Basis:	Wet Weight
Seq Number:	3100248			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**195**	4.97	mg/kg	08.30.19 13.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.29.19 14.00	Basis:	Wet Weight
Seq Number:	3100186			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.29.19 20.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**704**	24.9	mg/kg	08.29.19 20.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**149**	24.9	mg/kg	08.29.19 20.57		1
Total GRO-DRO	PHC628	**704**	24.9	mg/kg	08.29.19 20.57		1
Total TPH	PHC635	**853**	24.9	mg/kg	08.29.19 20.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.29.19 20.57	
o-Terphenyl	84-15-1	98	%	70-135	08.29.19 20.57	

Certificate of Analytical Results 635303

LT Environmental, Inc., Arvada, CO

PLU 78 SWD (2RP-3576)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.28.19 08.45
Lab Sample Id:	635303-010	Date Collected:	08.27.19 16.40	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.29.19 15.00	Basis:	Wet Weight
Seq Number:	3100245			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.30.19 13.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.30.19 13.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.30.19 13.48	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.30.19 13.48	

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 635303

LT Environmental, Inc.

PLU 78 SWD (2RP-3576)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100248 — Matrix: Solid — Date Prep: 08.30.19
MB Sample Id: 7685356-1-BLK — LCS Sample Id: 7685356-1-BKS — LCSD Sample Id: 7685356-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	245	98	244	98	90-110	0	20	mg/kg	08.30.19 10:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100248 — Matrix: Soil — Date Prep: 08.30.19
Parent Sample Id: 635299-011 — MS Sample Id: 635299-011 S — MSD Sample Id: 635299-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	303	250	571	107	565	105	90-110	1	20	mg/kg	08.30.19 11:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100248 — Matrix: Soil — Date Prep: 08.30.19
Parent Sample Id: 635303-005 — MS Sample Id: 635303-005 S — MSD Sample Id: 635303-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	225	250	483	103	482	103	90-110	0	20	mg/kg	08.30.19 12:20	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3100186 — Matrix: Solid — Date Prep: 08.29.19
MB Sample Id: 7685286-1-BLK — LCS Sample Id: 7685286-1-BKS — LCSD Sample Id: 7685286-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1040	104	1010	101	70-135	3	20	mg/kg	08.29.19 16:47	
Diesel Range Organics (DRO)	<25.0	1000	974	97	951	95	70-135	2	20	mg/kg	08.29.19 16:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		125		120		70-135	%	08.29.19 16:47
o-Terphenyl	93		110		104		70-135	%	08.29.19 16:47

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3100186 — Matrix: Solid — Date Prep: 08.29.19
MB Sample Id: 7685286-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.29.19 16:27	

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

QC Summary 635303

LT Environmental, Inc.

PLU 78 SWD (2RP-3576)

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3100186 | Matrix: Soil | Date Prep: 08.29.19
Parent Sample Id: 635303-001 | MS Sample Id: 635303-001 S | MSD Sample Id: 635303-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	983	98	969	97	70-135	1	20	mg/kg	08.29.19 17:45	
Diesel Range Organics (DRO)	<25.0	999	948	95	932	93	70-135	2	20	mg/kg	08.29.19 17:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	08.29.19 17:45
o-Terphenyl	96		96		70-135	%	08.29.19 17:45

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100245 | Matrix: Solid | Date Prep: 08.29.19
MB Sample Id: 7685326-1-BLK | LCS Sample Id: 7685326-1-BKS | LCSD Sample Id: 7685326-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0988	99	0.0922	92	70-130	7	35	mg/kg	08.30.19 08:47	
Toluene	<0.000456	0.100	0.101	101	0.0938	94	70-130	7	35	mg/kg	08.30.19 08:47	
Ethylbenzene	<0.000565	0.100	0.108	108	0.102	102	70-130	6	35	mg/kg	08.30.19 08:47	
m,p-Xylenes	<0.00101	0.200	0.209	105	0.197	99	70-130	6	35	mg/kg	08.30.19 08:47	
o-Xylene	<0.000344	0.100	0.109	109	0.104	104	70-130	5	35	mg/kg	08.30.19 08:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		101		70-130	%	08.30.19 08:47
4-Bromofluorobenzene	100		112		116		70-130	%	08.30.19 08:47

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100245 | Matrix: Soil | Date Prep: 08.29.19
Parent Sample Id: 635303-001 | MS Sample Id: 635303-001 S | MSD Sample Id: 635303-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0793	80	0.0876	88	70-130	10	35	mg/kg	08.30.19 09:27	
Toluene	<0.00198	0.0990	0.0808	82	0.0902	90	70-130	11	35	mg/kg	08.30.19 09:27	
Ethylbenzene	<0.00198	0.0990	0.0852	86	0.0952	95	70-130	11	35	mg/kg	08.30.19 09:27	
m,p-Xylenes	<0.00100	0.198	0.161	81	0.181	91	70-130	12	35	mg/kg	08.30.19 09:27	
o-Xylene	<0.00198	0.0990	0.0840	85	0.0944	94	70-130	12	35	mg/kg	08.30.19 09:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	08.30.19 09:27
4-Bromofluorobenzene	119		117		70-130	%	08.30.19 09:27

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

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

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

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

Chain of Custody

Work Order No: e635303

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:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@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 78 SWD (2RP-3576)	Turn Around	
Project Number:	01291813 1	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.4	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	10

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	3/27/19	1230	1'	1	X	X	X
PH01A			1240	4'	1	X	X	X
PH02			1255	1'	1	X	X	X
PH02A			1300	4'	1	X	X	X
FS01			1615	2'	1	X	X	X
FS02			1620	2'	1	X	X	X
SW01			1625	0-2'	1	X	X	X
SW02			1630	0-2'	1	X	X	X
SW03			1635	0-2'	1	X	X	X
SW04			1640	0-2'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		3/28/19 @ 0845	2		
			4		
			6		

Inter-Office Shipment

IOS Number **47032**

Date/Time: 08/28/19 10:09
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776104978254

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
635303-001	S	PH01	08/27/19 12:30	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-001	S	PH01	08/27/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-001	S	PH01	08/27/19 12:30	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-002	S	PH01A	08/27/19 12:40	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-002	S	PH01A	08/27/19 12:40	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-002	S	PH01A	08/27/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-003	S	PH02	08/27/19 12:55	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-003	S	PH02	08/27/19 12:55	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-003	S	PH02	08/27/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-004	S	PH02A	08/27/19 13:00	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-004	S	PH02A	08/27/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-004	S	PH02A	08/27/19 13:00	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-005	S	FS01	08/27/19 16:15	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-005	S	FS01	08/27/19 16:15	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-005	S	FS01	08/27/19 16:15	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-006	S	FS02	08/27/19 16:20	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-006	S	FS02	08/27/19 16:20	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-006	S	FS02	08/27/19 16:20	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-007	S	SW01	08/27/19 16:25	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-007	S	SW01	08/27/19 16:25	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-007	S	SW01	08/27/19 16:25	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-008	S	SW02	08/27/19 16:30	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-008	S	SW02	08/27/19 16:30	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-008	S	SW02	08/27/19 16:30	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635303-009	S	SW03	08/27/19 16:35	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **47032**

Date/Time: 08/28/19 10:09
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776104978254

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
635303-009	S	SW03	08/27/19 16:35	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-009	S	SW03	08/27/19 16:35	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-010	S	SW04	08/27/19 16:40	SW8021B	BTEX by EPA 8021B	09/04/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635303-010	S	SW04	08/27/19 16:40	E300_CL	Chloride by EPA 300	09/04/19	02/23/20	JKR	CL	
635303-010	S	SW04	08/27/19 16:40	SW8015MOD_NM	TPH by SW8015 Mod	09/04/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/28/2019

Received By: Brianna Teel

Date Received: 08/29/2019 11:46

Cooler Temperature: 0.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47032

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 08/28/2019 10:09 AM

Received By: Brianna Teel **Date Received:** 08/29/2019 11:46 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 08/29/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/28/2019 08:45:00 AM

Work Order #: 635303

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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)?	**Yes**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/28/2019

Checklist reviewed by: Jessica Kramer Date: 08/28/2019

Jessica Kramer

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

COMMENTS

Action 234025

COMMENTS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 234025
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
csmith	Application Returned to OCD Review: Data requested was present in Appendix E.	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

Action 234025

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 234025
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Closure approved.	6/30/2023
amaxwell	Release area is subject to o 19.15.29.13 NMAC Restoration, Reclamation, and Re-Vegetation upon removal of production equipment or plug and abandonment activity.	6/30/2023