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

March 28, 2019

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

RE: Closure Request
Poker Lake Unit 387H
Remediation Permit Number 2RP-4056
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling activities at the Poker Lake Unit (PLU) 387H well pad (Site) in Unit D, Section 18, Township 25 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to assess impacts to soil after loose bolts on the heater-treater fire tube flange caused the release of 4 barrels (bbls) of crude oil and 19 bbls of produced water within the process equipment berm. The release was discovered on December 28, 2016. A vacuum truck was dispatched to the Site and recovered approximately 2 bbls of crude oil and 13 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 December 30, 2016, and was assigned Remediation Permit Number (RP) 2RP-4056 (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. The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with 19.15.29 of the New Mexico Administrative Code (NMAC) dated August 14, 2018. This release is categorized as a Tier IV site in the Compliance Agreement, meaning that the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC, however remediation was pending. Based on the results of the soil sampling events, XTO is submitting this closure report and requesting no further action for the release event.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied Table 1, *Closure Criteria for Soils Impacted by a Release*. 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 is C 03781 POD1, located approximately 1.3 miles southwest of the Site, which has a depth to groundwater of 325 feet bgs and a total depth of 720 feet bgs. The water well is approximately 65 feet lower in elevation than the Site. The nearest continuously flowing water or significant watercourse is a seasonal stream located approximately 6,808 feet southwest of the release 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 in a low karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

SOIL SAMPLING

During March 2018, an LTE scientist collected eight preliminary soil samples (SS01 through SS08) within the release area to assess the lateral extent of soil impacts. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location at approximately 0.5 feet bgs. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico or Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

On December 20, 2018, LTE personnel returned to the Site to assess the vertical extent of impacted soil in the release area. Potholes were advanced by backhoe to a depth of 4 feet bgs at three of the preliminary soil sample locations (SS03, SS05, and SS08). Soil samples SS03A, SS05A, and SS08A were collected from a depth of 4 feet bgs at the preliminary SS03, SS05, and SS08 soil sample locations. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The potholes were backfilled with the soil removed; no

soil was removed from the site for disposal. The soil sample locations are depicted on Figure 2, and soil sample logs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in soil samples SS01 through SS08 collected at 0.5 feet bgs, and soil samples SS03A, SS05A, and SS08A collected at 4 feet bgs. Based on the laboratory analytical results, no soil excavation was required. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

Soil samples SS01 through SS08, SS03A, SS05A, and SS08A were collected within the release area to determine if any impacted soil remained in place as a result of the historical release. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all soil samples. Initial response efforts and natural degradation have mitigated impacts at the Site. XTO requests no further action for this release. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-4056)
Attachment 2	Soil Sample Logs
Attachment 3	Laboratory Analytical Reports
Attachment 4	Photographic Log

FIGURES

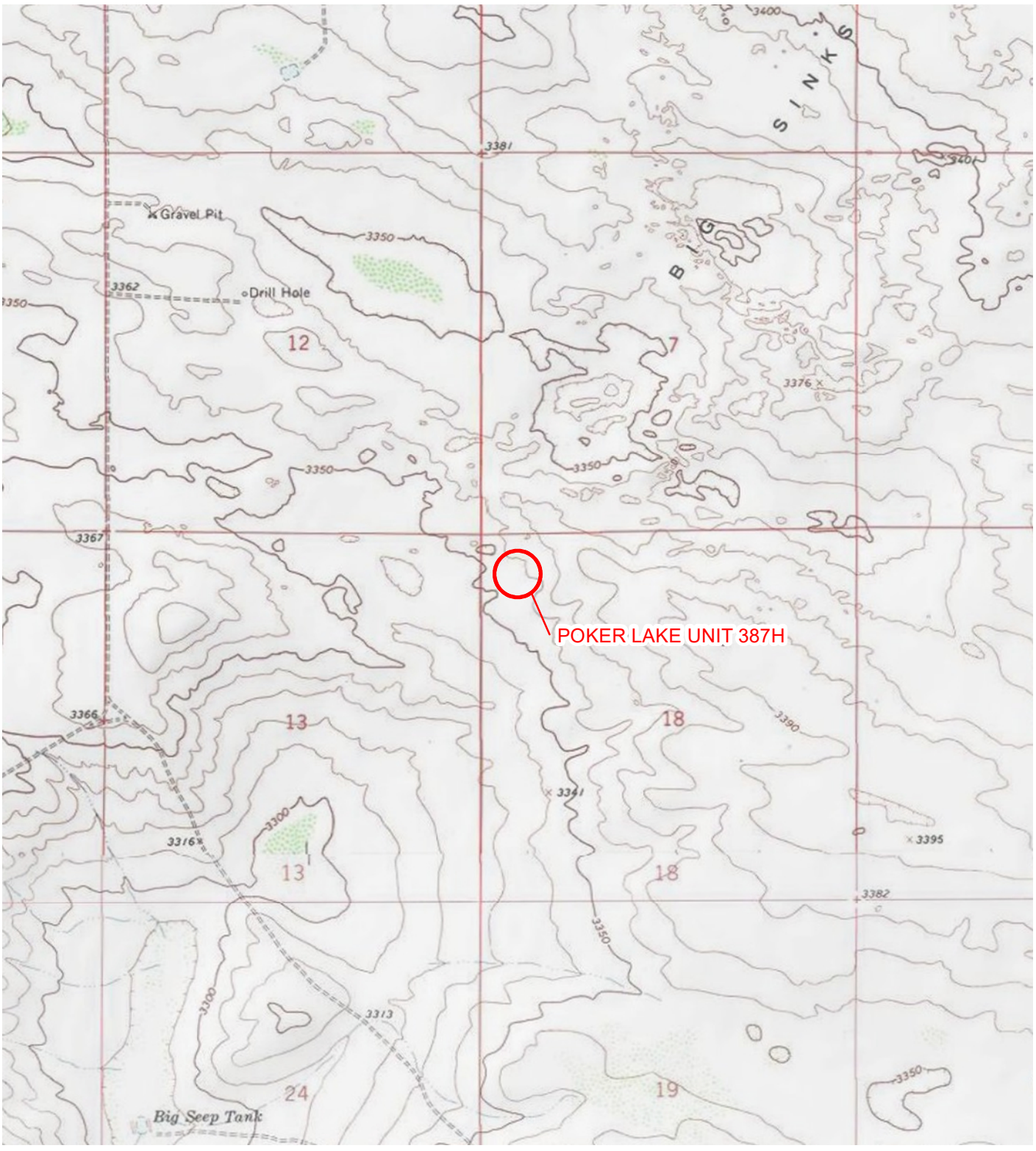


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

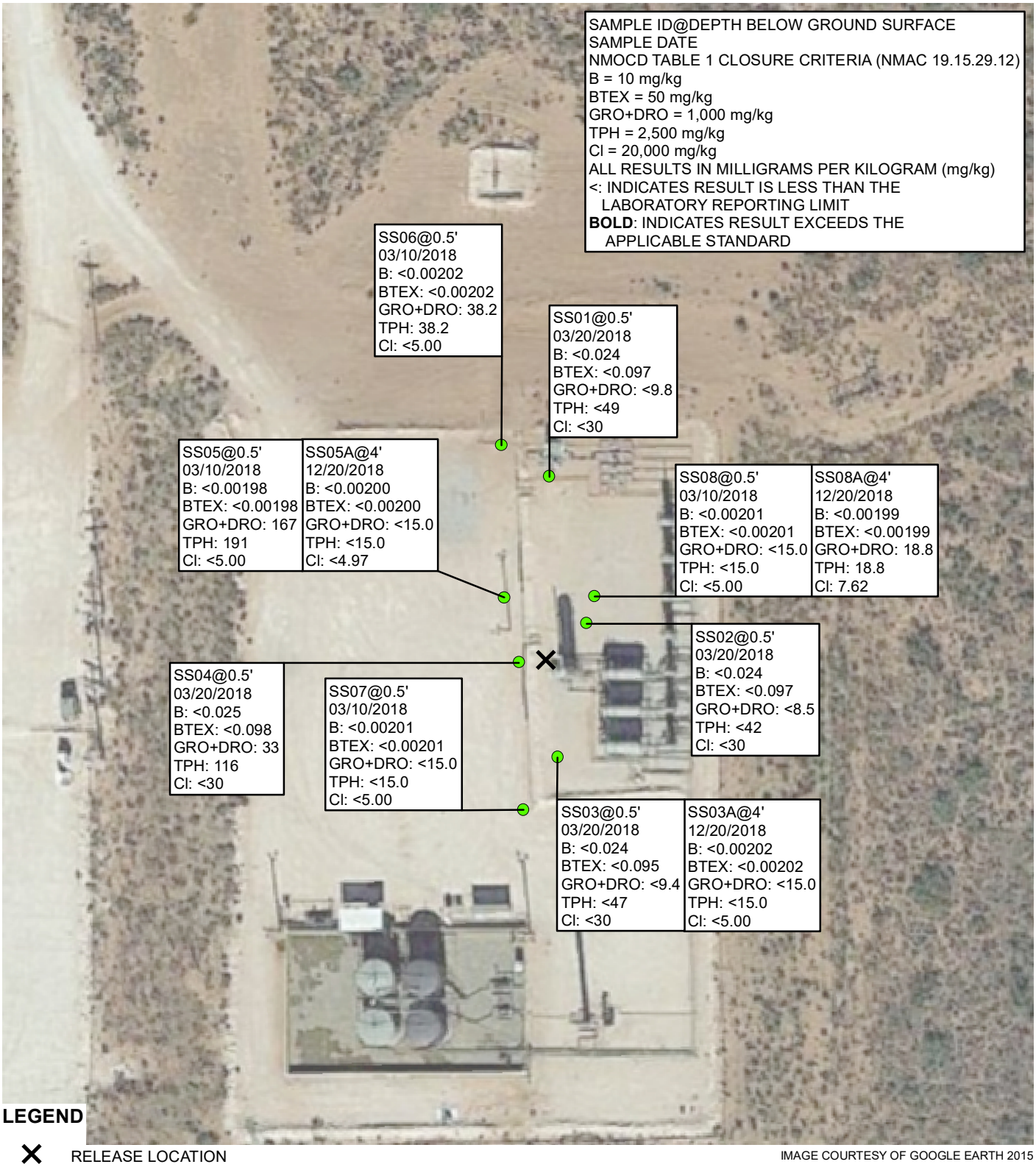
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-4056

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 387H
LOT 1 SEC 18 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918090_PLU 387H-30-015-41185\012918090_FIG01_SL_2018_4056.mxd



LEGEND

✕ RELEASE LOCATION

● SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

IMAGE COURTESY OF GOOGLE EARTH 2015

0 60 120
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-4056

FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 387H
LOT 1 SEC 18 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918090_PLU 387H-30-015-41185\012918090_FIG02_SITE_2018_4056.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 387H
REMEDIATION PERMIT NUMBER 2RP-4056
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	03/20/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.8	<49	<9.8	<49	<30
SS02	0.5	03/20/2018	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<8.5	<42	<8.5	<42	<30
SS03	0.5	03/20/2018	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.4	<47	<9.4	<47	<30
SS04	0.5	03/20/2018	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	33	83	33	116	<30
SS05	0.5	03/10/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	167	23.6	167	191	<5.00
SS06	0.5	03/10/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	38.2	<15.0	38.2	38.2	<5.00
SS07	0.5	03/10/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS08	0.5	03/10/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS03A	4	12/20/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS05A	4	12/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SS08A	4	12/20/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	18.8	<15.0	<15.0	18.8	18.8	7.62
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
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/k
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018 NMAC - New Mexico Administrative Code

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4056)

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 30 2016
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1700442167

OPERATOR

☒ Initial Report ☐ Final Repor

Name of Company: BOPCO, L.P. 260737	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU 387H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-41185

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	18	25S	31E	660		200		Eddy

Latitude: 32.135860 **Longitude**: 103.824077

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 19 barrels PW 4 barrels Oil	Volume Recovered: 13 barrels PW 2 barrels Oil
Source of Release: Heater treater fire tube failed	Date and Hour of Occurrence: 12-28-16 @ 8:00am	Date and Hour of Discovery: 12-28-16 @ 8:30am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*
Lease operator reported leak from heater treater fire tube flange due to the bolts being loose. Crude oil and produced water was release inside earthen berm, a vacuum truck was called to the location and was able to recover 2 barrels of oil and 13 barrels of produced water.

Describe Area Affected and Cleanup Action Taken.*
Release occurred inside the earthen berm, a vacuum truck was called to the location and was able to recover 2 barrels of oil and 13 barrels of produced water. Remediation to be planned

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: Crystal Weaver
Title: Assistant Remediation Foreman	Approval Date: 1/4/17 Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: See attached Attached ☒
Date: 12/30/16 Phone: 432-214-3704	

Attach Additional Sheets If Necessary

2RP-4056

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **12/30/16** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 3RP-4056 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 2/3/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-4056
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4056
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.135860 Longitude -103.824077
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 387H	Site Type Exploration and Production
Date Release Discovered 12/28/2016	API# *(if applicable)* 30-015-41185

Unit Letter	Section	Township	Range	County
D	18	25S	31E	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) 4	Volume Recovered (bbls) 2
☒ Produced Water	Volume Released (bbls) 19	Volume Recovered (bbls) 13
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The lease operator reported a leak from the heater treater fire tube flange due to the bolts being loose. Crude oil and produced water were release inside the earthen berm, a vacuum truck was called to the location and was able to recover 2 barrels of oil and 13 barrels of produced water. Release occurred inside the earthen berm.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4056
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 3/28/2019

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

OCD Only

Received by: Date:

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4056
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-4056
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 3/28/2019

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

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4056
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). Site photographs show affected portions of caliche pad.

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 3/28/2019

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: SOIL SAMPLE LOGS

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

Identifier: SS03A	Date: 12/20/2018		
Project Name: Poker Lake Unit 387H	RP Number: 2RP-4056		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LL	Method: Backhoe	
Lat/Long: 32.135860, -103.824077	Field Screening: PID	Hole Diameter: NA	Total Depth: 4 feet
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SC	Clay sandy loam, fine-grained sand, soft clay
					1			
					2			
					3			
	<130	0	SS03A@4'		4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: SS05A	Date: 12/20/2018
	Project Name: Poker Lake Unit 387H	RP Number: 2RP-4056
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LL	Method: Backhoe
Lat/Long: 32.135860, -103.824077	Field Screening: PID	Hole Diameter: NA	Total Depth: 4 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	<130	0	SS05A@4'		0		SC	Clay sandy loam, fine-grained sand, soft clay
					1			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: SS08A	Date: 12/20/2018
	Project Name: Poker Lake Unit 387H	RP Number: 2RP-4056
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LL	Method: Backhoe
Lat/Long: 32.135860, -103.824077	Field Screening: PID	Hole Diameter: NA	Total Depth: 4 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	<130	0	SS08A@4'		0		SC	Clay sandy loam, fine-grained sand, soft clay
					1			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 04, 2018

Adrian Baker
XTO Midland
6401 Holiday Hill Rd #200
Midland, TX 79707
TEL: (432) 894-5641
FAX

RE: 2RP 4056 Delaware Soil Sampling OrderNo.: 1803E21

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/27/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803E21**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS01
Project: 2RP 4056 Delaware Soil Sampling **Collection Date:** 3/20/2018 4:20:00 PM
Lab ID: 1803E21-001 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/2/2018 10:27:35 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/2/2018 10:27:35 AM
Surr: DNOP	76.7	70-130		%Rec	1	4/2/2018 10:27:35 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	4/3/2018 3:58:20 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	0.024		mg/Kg	1	3/28/2018 3:11:52 PM
Toluene	ND	0.049		mg/Kg	1	3/28/2018 3:11:52 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/28/2018 3:11:52 PM
Xylenes, Total	ND	0.097		mg/Kg	1	3/28/2018 3:11:52 PM
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	3/28/2018 3:11:52 PM
Surr: Toluene-d8	93.1	70-130		%Rec	1	3/28/2018 3:11:52 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/28/2018 3:11:52 PM
Surr: BFB	118	70-130		%Rec	1	3/28/2018 3:11:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **1803E21**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS02
Project: 2RP 4056 Delaware Soil Sampling **Collection Date:** 3/20/2018 4:22:00 PM
Lab ID: 1803E21-002 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	4/2/2018 11:56:30 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	4/2/2018 11:56:30 AM
Surr: DNOP	96.0	70-130		%Rec	1	4/2/2018 11:56:30 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	4/3/2018 4:10:44 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	0.024		mg/Kg	1	3/28/2018 4:21:16 PM
Toluene	ND	0.048		mg/Kg	1	3/28/2018 4:21:16 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/28/2018 4:21:16 PM
Xylenes, Total	ND	0.097		mg/Kg	1	3/28/2018 4:21:16 PM
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	3/28/2018 4:21:16 PM
Surr: Toluene-d8	89.9	70-130		%Rec	1	3/28/2018 4:21:16 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/28/2018 4:21:16 PM
Surr: BFB	116	70-130		%Rec	1	3/28/2018 4:21:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **1803E21**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS03
Project: 2RP 4056 Delaware Soil Sampling **Collection Date:** 3/20/2018 4:24:00 PM
Lab ID: 1803E21-003 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/30/2018 6:27:29 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/30/2018 6:27:29 AM
Surr: DNOP	78.6	70-130		%Rec	1	3/30/2018 6:27:29 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	4/3/2018 4:23:09 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	0.024		mg/Kg	1	3/28/2018 5:30:42 PM
Toluene	ND	0.047		mg/Kg	1	3/28/2018 5:30:42 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/28/2018 5:30:42 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/28/2018 5:30:42 PM
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	3/28/2018 5:30:42 PM
Surr: Toluene-d8	92.4	70-130		%Rec	1	3/28/2018 5:30:42 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/28/2018 5:30:42 PM
Surr: BFB	112	70-130		%Rec	1	3/28/2018 5:30:42 PM

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

Qualifiers:

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

Analytical Report
Lab Order **1803E21**
Date Reported: **4/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Midland **Client Sample ID:** SS04
Project: 2RP 4056 Delaware Soil Sampling **Collection Date:** 3/20/2018 4:26:00 PM
Lab ID: 1803E21-004 **Matrix:** SOIL **Received Date:** 3/27/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	33	9.5		mg/Kg	1	3/30/2018 6:49:37 AM
Motor Oil Range Organics (MRO)	83	47		mg/Kg	1	3/30/2018 6:49:37 AM
Surr: DNOP	73.4	70-130		%Rec	1	3/30/2018 6:49:37 AM
EPA METHOD 300.0: ANIONS						Analyst: **MRA**
Chloride	ND	30		mg/Kg	20	4/3/2018 4:35:34 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	0.025		mg/Kg	1	3/28/2018 5:53:50 PM
Toluene	ND	0.049		mg/Kg	1	3/28/2018 5:53:50 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/28/2018 5:53:50 PM
Xylenes, Total	ND	0.098		mg/Kg	1	3/28/2018 5:53:50 PM
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	3/28/2018 5:53:50 PM
Surr: Toluene-d8	89.2	70-130		%Rec	1	3/28/2018 5:53:50 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/28/2018 5:53:50 PM
Surr: BFB	116	70-130		%Rec	1	3/28/2018 5:53:50 PM

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E21**
04-Apr-18

Client: XTO Midland
Project: 2RP 4056 Delaware Soil Sampling

Sample ID	**MB-37385**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37385**	RunNo:	**50271**					
Prep Date:	**4/2/2018**	Analysis Date:	**4/3/2018**	SeqNo:	**1628346**	Units:	**mg/Kg**			

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

Sample ID	**LCS-37385**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37385**	RunNo:	**50271**					
Prep Date:	**4/2/2018**	Analysis Date:	**4/3/2018**	SeqNo:	**1628347**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E21**

04-Apr-18

Client: XTO Midland

Project: 2RP 4056 Delaware Soil Sampling

Sample ID	**MB-37283**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**37283**	RunNo:	**50178**					
Prep Date:	**3/28/2018**	Analysis Date:	**3/29/2018**	SeqNo:	**1625707**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.7		10.00		77.2	70	130			

Sample ID	**LCS-37283**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**37283**	RunNo:	**50204**					
Prep Date:	**3/28/2018**	Analysis Date:	**3/30/2018**	SeqNo:	**1626106**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	3.7		5.000		73.6	70	130			

Sample ID	**LCS-37326**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**37326**	RunNo:	**50229**					
Prep Date:	**3/29/2018**	Analysis Date:	**4/2/2018**	SeqNo:	**1627194**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.8	70	130			

Sample ID	**MB-37326**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**37326**	RunNo:	**50229**					
Prep Date:	**3/29/2018**	Analysis Date:	**4/2/2018**	SeqNo:	**1627195**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.9	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E21**

04-Apr-18

Client: XTO Midland

Project: 2RP 4056 Delaware Soil Sampling

Sample ID	**lcs-37278**	SampType:	**LCS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**BatchQC**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624160**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.5	80	120			
Toluene	0.93	0.050	1.000	0	93.3	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.1	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.4	70	130			
Surr: Toluene-d8	0.46		0.5000		92.2	70	130			

Sample ID	**mb-37278**	SampType:	**MBLK**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**PBS**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624161**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.44		0.5000		88.5	70	130			

Sample ID	**1803e21-001ams**	SampType:	**MS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**SS01**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624712**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.024	0.9728	0	78.3	80	120			S
Toluene	0.97	0.049	0.9728	0.004304	99.6	80	120			
Ethylbenzene	1.0	0.049	0.9728	0.004615	103	80	120			
Xylenes, Total	2.9	0.097	2.918	0.02588	97.4	80	120			
Surr: 4-Bromofluorobenzene	0.47		0.4864		97.2	70	130			
Surr: Toluene-d8	0.44		0.4864		90.7	70	130			

Sample ID	**1803E21-001AMSD**	SampType:	**MSD4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**SS01**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624713**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	0.9921	0	87.9	80	120	13.5	0	
Toluene	0.95	0.050	0.9921	0.004304	95.7	80	120	1.99	0	
Ethylbenzene	1.1	0.050	0.9921	0.004615	108	80	120	6.21	0	
Xylenes, Total	3.1	0.099	2.976	0.02588	105	80	120	9.25	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E21**

04-Apr-18

Client: XTO Midland

Project: 2RP 4056 Delaware Soil Sampling

Sample ID	**1803E21-001AMSD**	SampType:	**MSD4**	TestCode:	**EPA Method 8260B: Volatiles Short List**
Client ID:	**SS01**	Batch ID:	**37278**	RunNo:	**50140**
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**	SeqNo:	**1624713** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.49		0.4960		99.1	70	130	0	0	
Surr: Toluene-d8	0.44		0.4960		88.2	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803E21**

04-Apr-18

Client: XTO Midland

Project: 2RP 4056 Delaware Soil Sampling

Sample ID	**lcs-37278**	SampType:	**LCS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624152**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	70	130			
Surr: BFB	490		500.0		98.6	70	130			

Sample ID	**mb-37278**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624153**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	560		500.0		113	70	130			

Sample ID	**1803e21-002ams**	SampType:	**MS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**SS02**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624681**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	23.99	0	101	64.7	142			
Surr: BFB	500		479.8		105	70	130			

Sample ID	**1803e21-002amsd**	SampType:	**MSD**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**SS02**	Batch ID:	**37278**		RunNo:	**50140**				
Prep Date:	**3/27/2018**	Analysis Date:	**3/28/2018**		SeqNo:	**1624682**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	23.83	0	99.7	64.7	142	2.02	20	
Surr: BFB	500		476.6		105	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: XTO MIDLAND Work Order Number: 1803E21 RcptNo: 1

Received By: **Mandy Woods** 3/27/2018 9:30:00 AM

Completed By: **Michelle Garcia** 3/27/2018 12:00:58 PM Michelle Garcia

Reviewed By: 03/27/18

Labeled By JAS

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

Chain-of-Custody Record

Client: XTO Energy, Delware division	☒ Standard ☐ Rush
Kyle Litterll	Project Name: 2RP - 4056 Delaware Soil Sampling
Mailing Addre: 3300 N. A. Street Suite 103 Midland, Texas 79705	Project #: 2RP - 4056
Phone #: 433-704-5178	Project Manager: Adrian Baker
email or Fax#: abaker@ltenv.com	Sampler: Josh Adams
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	On Ice: ☒ Yes ☐ No
Accreditation: ☐ NELAP ☐ Other	Sample Temperature: 4.3°
☐ EDD (Type)	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803E21	TPH - 8015 DRO, MRO, GRO	BTEX - 8021	Chlorides - 300.1
3/20/2018	1620	SOIL	SS01	(1) 4oz.	cool	001	X	X	X
3/20/2018	1622	SOIL	SS02	(1) 4oz.	cool	002	X	X	X
3/20/2018	1624	SOIL	SS03	(1) 4oz.	cool	003	X	X	X
3/20/2018	1626	SOIL	SS04	(1) 4oz.	cool	004	X	X	X

3/23/2018	Time: 0730	Relinquished by:	Received by:	Date: 3/23/18	Time: 0730
Date: 3/26/18	Time: 1900	Relinquished by:	Received by: Courier 3/27	Date: 3/27/18	Time: 0930

Remarks:

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

Analytical Report 579293

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 387H

09-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

09-JAN-19

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

Reference: XENCO Report No(s): **579293**
PLU 387H
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 579293. 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. 579293 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 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS05	S	03-10-18 10:10	6 In	579293-001
SS06	S	03-10-18 10:20	6 In	579293-002
SS07	S	03-10-18 10:30	6 In	579293-003
SS08	S	03-10-18 10:40	6 In	579293-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 387H

Project ID:
Work Order Number(s): *579293*

Report Date: *09-JAN-19*
Date Received: *03/15/2018*

Sample receipt non conformances and comments:

Per clients email, changed sample names. JKR 01/09/18 NEW VERSION GENERATED.
SS1 TO SS05
SS2 TO SS06
SS3 TO SS07
SS4 TO SS08

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3044101 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3044104 BTEX by EPA 8021B
Lab Sample ID 579293-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 579293-004.
The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 579293

LT Environmental, Inc., Arvada, CO

Project Name: PLU 387H

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Mar-15-18 08:26 am
Report Date: 09-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	579293-001		579293-002		579293-003		579293-004					
	Field Id:	SS05		SS06		SS07		SS08					
	Depth:	6- In		6- In		6- In		6- In					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-10-18 10:10		Mar-10-18 10:20		Mar-10-18 10:30		Mar-10-18 10:40					
BTEX by EPA 8021B	***Extracted:***	Mar-16-18 13:00		Mar-16-18 13:00		Mar-16-18 13:00		Mar-16-18 14:30					
	Analyzed:	Mar-16-18 21:29		Mar-16-18 21:46		Mar-16-18 22:05		Mar-17-18 00:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
Toluene		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
Ethylbenzene		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
m,p-Xylenes		<0.00397	0.00397	<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402				
o-Xylene		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
Total Xylenes		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
Total BTEX		<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Mar-16-18 08:30		Mar-16-18 08:30		Mar-16-18 08:30		Mar-16-18 08:30					
	Analyzed:	Mar-16-18 10:32		Mar-16-18 10:37		Mar-16-18 10:43		Mar-16-18 10:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00				
TPH by SW8015 Mod	***Extracted:***	Mar-16-18 17:00		Mar-16-18 17:00		Mar-16-18 17:00		Mar-16-18 17:00					
	Analyzed:	Mar-17-18 01:22		Mar-17-18 02:40		Mar-17-18 03:06		Mar-17-18 03:32					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		167	15.0	38.2	15.0	<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		23.6	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		191	15.0	38.2	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-001	Date Collected:	03.10.18 10.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.16.18 08.30	Basis:	Wet Weight
Seq Number:	3043954				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.16.18 10.32	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.16.18 17.00	Basis:	Wet Weight
Seq Number:	3044123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.17.18 01.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**167**	15.0	mg/kg	03.17.18 01.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**23.6**	15.0	mg/kg	03.17.18 01.22		1
Total TPH	PHC635	**191**	15.0	mg/kg	03.17.18 01.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.17.18 01.22	
o-Terphenyl	84-15-1	114	%	70-135	03.17.18 01.22	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-001	Date Collected:	03.10.18 10.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.16.18 13.00	Basis:	Wet Weight
Seq Number:	3044101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.16.18 21.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.16.18 21.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.16.18 21.29	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.16.18 21.29	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-002	Date Collected:	03.10.18 10.20	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.16.18 08.30	Basis:	Wet Weight
Seq Number:	3043954				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.16.18 10.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.16.18 17.00	Basis:	Wet Weight
Seq Number:	3044123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.17.18 02.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.2**	15.0	mg/kg	03.17.18 02.40		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.17.18 02.40	U	1
Total TPH	PHC635	**38.2**	15.0	mg/kg	03.17.18 02.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.17.18 02.40	
o-Terphenyl	84-15-1	108	%	70-135	03.17.18 02.40	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-002	Date Collected:	03.10.18 10.20	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.16.18 13.00	Basis:	Wet Weight
Seq Number:	3044101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.16.18 21.46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.16.18 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	79	%	70-130	03.16.18 21.46	
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.16.18 21.46	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-003	Date Collected:	03.10.18 10.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.16.18 08.30	Basis:	Wet Weight
Seq Number:	3043954				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.16.18 10.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.16.18 17.00	Basis:	Wet Weight
Seq Number:	3044123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.17.18 03.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.17.18 03.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.17.18 03.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.17.18 03.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.17.18 03.06	
o-Terphenyl	84-15-1	104	%	70-135	03.17.18 03.06	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-003	Date Collected:	03.10.18 10.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.16.18 13.00	Basis:	Wet Weight
Seq Number:	3044101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.16.18 22.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.16.18 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	03.16.18 22.05	
1,4-Difluorobenzene	540-36-3	84	%	70-130	03.16.18 22.05	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-004	Date Collected:	03.10.18 10.40	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.16.18 08.30	Basis:	Wet Weight
Seq Number:	3043954				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.16.18 10.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.16.18 17.00	Basis:	Wet Weight
Seq Number:	3044123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.17.18 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.17.18 03.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.17.18 03.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.17.18 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.17.18 03.32	
o-Terphenyl	84-15-1	108	%	70-135	03.17.18 03.32	

Certificate of Analytical Results 579293

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	03.15.18 08.26
Lab Sample Id:	579293-004	Date Collected:	03.10.18 10.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.16.18 14.30	Basis:	Wet Weight
Seq Number:	3044104				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.17.18 00.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.17.18 00.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	03.17.18 00.39	
1,4-Difluorobenzene	540-36-3	77	%	70-130	03.17.18 00.39	

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 579293

LT Environmental, Inc.

PLU 387H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043954 Matrix: Solid Date Prep: 03.16.18
MB Sample Id: 7640903-1-BLK LCS Sample Id: 7640903-1-BKS LCSD Sample Id: 7640903-1-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	235	94	238	95	90-110	1	20	mg/kg	03.16.18 09:18	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043954 Matrix: Soil Date Prep: 03.16.18
Parent Sample Id: 579294-001 MS Sample Id: 579294-001 S MSD Sample Id: 579294-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	247	99	90-110	0	20	mg/kg	03.16.18 10:59	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3043954 Matrix: Soil Date Prep: 03.16.18
Parent Sample Id: 579401-001 MS Sample Id: 579401-001 S MSD Sample Id: 579401-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	240	96	243	97	90-110	1	20	mg/kg	03.16.18 09:44	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3044123 Matrix: Solid Date Prep: 03.16.18
MB Sample Id: 7641055-1-BLK LCS Sample Id: 7641055-1-BKS LCSD Sample Id: 7641055-1-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	1060	106	971	97	70-135	9	35	mg/kg	03.17.18 00:30	
Diesel Range Organics (DRO)	<15.0	1000	1090	109	1010	101	70-135	8	35	mg/kg	03.17.18 00:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		121		109		70-135	%	03.17.18 00:30
o-Terphenyl	100		114		108		70-135	%	03.17.18 00:30

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 579293

LT Environmental, Inc.

PLU 387H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3044123 Matrix: Soil Date Prep: 03.16.18
Parent Sample Id: 579293-001 MS Sample Id: 579293-001 S MSD Sample Id: 579293-001 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	997	100	998	100	70-135	0	35	mg/kg	03.17.18 01:47	
Diesel Range Organics (DRO)	167	999	1180	101	1190	103	70-135	1	35	mg/kg	03.17.18 01:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		111		70-135	%	03.17.18 01:47
o-Terphenyl	109		109		70-135	%	03.17.18 01:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3044101 Matrix: Solid Date Prep: 03.16.18
MB Sample Id: 7641014-1-BLK LCS Sample Id: 7641014-1-BKS LCSD Sample Id: 7641014-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0985	99	0.102	101	70-130	3	35	mg/kg	03.16.18 13:27	
Toluene	<0.00200	0.100	0.106	106	0.110	109	70-130	4	35	mg/kg	03.16.18 13:27	
Ethylbenzene	<0.00200	0.100	0.119	119	0.127	126	70-130	7	35	mg/kg	03.16.18 13:27	
m,p-Xylenes	<0.00401	0.200	0.240	120	0.252	125	70-130	5	35	mg/kg	03.16.18 13:27	
o-Xylene	<0.00200	0.100	0.118	118	0.123	122	70-130	4	35	mg/kg	03.16.18 13:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	80		86		87		70-130	%	03.16.18 13:27
4-Bromofluorobenzene	120		113		124		70-130	%	03.16.18 13:27

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3044104 Matrix: Solid Date Prep: 03.16.18
MB Sample Id: 7641020-1-BLK LCS Sample Id: 7641020-1-BKS LCSD Sample Id: 7641020-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0959	95	0.0928	93	70-130	3	35	mg/kg	03.16.18 22:44	
Toluene	<0.00202	0.101	0.102	101	0.0976	98	70-130	4	35	mg/kg	03.16.18 22:44	
Ethylbenzene	<0.00202	0.101	0.115	114	0.109	109	70-130	5	35	mg/kg	03.16.18 22:44	
m,p-Xylenes	<0.00403	0.202	0.225	111	0.215	108	70-130	5	35	mg/kg	03.16.18 22:44	
o-Xylene	<0.00202	0.101	0.112	111	0.109	109	70-130	3	35	mg/kg	03.16.18 22:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		86		88		70-130	%	03.16.18 22:44
4-Bromofluorobenzene	123		128		130		70-130	%	03.16.18 22:44

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

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

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

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

QC Summary 579293

LT Environmental, Inc.

PLU 387H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3044101 | Matrix: Soil | Date Prep: 03.16.18
Parent Sample Id: 579458-001 | MS Sample Id: 579458-001 S | MSD Sample Id: 579458-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0477	48	0.0533	53	70-130	11	35	mg/kg	03.16.18 14:06	X
Toluene	<0.00199	0.0994	0.0509	51	0.0554	56	70-130	8	35	mg/kg	03.16.18 14:06	X
Ethylbenzene	<0.00199	0.0994	0.0575	58	0.0604	61	70-130	5	35	mg/kg	03.16.18 14:06	X
m,p-Xylenes	<0.00398	0.199	0.114	57	0.119	60	70-130	4	35	mg/kg	03.16.18 14:06	X
o-Xylene	<0.00199	0.0994	0.0554	56	0.0585	59	70-130	5	35	mg/kg	03.16.18 14:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		84		70-130	%	03.16.18 14:06
4-Bromofluorobenzene	126		127		70-130	%	03.16.18 14:06

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3044104 | Matrix: Soil | Date Prep: 03.16.18
Parent Sample Id: 579293-004 | MS Sample Id: 579293-004 S | MSD Sample Id: 579293-004 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	0.0751	75	0.0709	70	70-130	6	35	mg/kg	03.16.18 23:22	
Toluene	<0.00200	0.100	0.0438	44	0.0420	42	70-130	4	35	mg/kg	03.16.18 23:22	X
Ethylbenzene	<0.00200	0.100	0.0573	57	0.0543	54	70-130	5	35	mg/kg	03.16.18 23:22	X
m,p-Xylenes	<0.00401	0.200	0.115	58	0.109	54	70-130	5	35	mg/kg	03.16.18 23:22	X
o-Xylene	<0.00200	0.100	0.0821	82	0.0785	78	70-130	4	35	mg/kg	03.16.18 23:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		82		70-130	%	03.16.18 23:22
4-Bromofluorobenzene	122		126		70-130	%	03.16.18 23:22

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

CHAIN OF CUSTODY

Revision 2016.1

Page ___ Of ___

XENCO LABORATORIES

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Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550
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Xenco Quote #

Xenco Job # 579293

Client / Reporting Information

Company Name / Branch: LTE/Midland

Company Address: 3300 N. A St. Bldg 1 STE 103 Midland, Tx.

Email: Abaker@ltenv.com

Phone No: 432-704-5178

Project Contact: Adrian Baker

Samplers's Name: Eric Carroll

Project Information

Project Name/Number: PLU 387H

Project Location: NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 30-015-41185 (2RP-4056)

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1	Field Comments
1	SS1	6"	3/6/23	1010	S	1									X	X	X	
2	SS2	↓	↓	1020	↓	↓									X	X	X	
3	SS3			1030											X	X	X	
4	SS4			1040											X	X	X	
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

Temp: 4.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.6

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Eric Carroll	3/14 1635				
2						3/15 8:16
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						X

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/15/2018 08:26:00 AM

Work Order #: 579293

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#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: Connie Hernandez Date: 03/15/2018

Connie Hernandez

Checklist reviewed by: Jessica Kramer Date: 03/15/2018

Jessica Kramer

Analytical Report 609804

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 387H

09-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

09-JAN-19

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

Reference: XENCO Report No(s): **609804**
PLU 387H
Project Address: Eddy, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 609804. 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. 609804 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.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS03A	S	12-20-18 10:00	4 ft	609804-001
SS08A	S	12-20-18 10:15	4 ft	609804-002
SS05A	S	12-20-18 10:40	4 ft	609804-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 387H

Project ID:
Work Order Number(s): *609804*

Report Date: *09-JAN-19*
Date Received: *12/27/2018*

Sample receipt non conformances and comments:

Per clients email request, corrected sample names. NEW VERSION GENERATED. JKR 01/09/19
SS1A TO SS05A
SS4A TO SS08A

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3074614 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3074784 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 609634-040 S,609634-040 SD.

Certificate of Analysis Summary 609804

LT Environmental, Inc., Arvada, CO

Project Name: PLU 387H

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

Date Received in Lab: Thu Dec-27-18 11:36 am
Report Date: 09-JAN-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	609804-001		609804-002		609804-003					
	Field Id:	SS03A		SS08A		SS05A					
	Depth:	4- ft		4- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Dec-20-18 10:00		Dec-20-18 10:15		Dec-20-18 10:40					
BTEX by EPA 8021B	***Extracted:***	Jan-02-19 08:30		Jan-02-19 08:30		Jan-02-19 08:30					
	Analyzed:	Jan-02-19 14:36		Jan-02-19 14:58		Jan-02-19 15:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00400	0.00400				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Jan-03-19 10:30		Jan-03-19 10:30		Jan-03-19 10:30					
	Analyzed:	Jan-03-19 20:11		Jan-03-19 20:17		Jan-03-19 20:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<5.00	5.00	7.62	5.02	<4.97	4.97				
TPH by SW8015 Mod	***Extracted:***	Jan-02-19 17:00		Jan-02-19 17:00		Jan-02-19 17:00					
	Analyzed:	Jan-04-19 00:40		Jan-04-19 01:00		Jan-04-19 01:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	18.8	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	18.8	15.0	<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-001	Date Collected:	12.20.18 10.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.03.19 10.30	Basis:	Wet Weight
Seq Number:	3074716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.03.19 20.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.19 17.00	Basis:	Wet Weight
Seq Number:	3074784				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.04.19 00.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.04.19 00.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.04.19 00.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.04.19 00.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.04.19 00.40	
o-Terphenyl	84-15-1	99	%	70-135	01.04.19 00.40	

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-001	Date Collected:	12.20.18 10.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.02.19 08.30	Basis:	Wet Weight
Seq Number:	3074614				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.02.19 14.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.02.19 14.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.02.19 14.36	
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.02.19 14.36	

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-002	Date Collected:	12.20.18 10.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.03.19 10.30	Basis:	Wet Weight
Seq Number:	3074716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.62**	5.02	mg/kg	01.03.19 20.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.19 17.00	Basis:	Wet Weight
Seq Number:	3074784				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.8**	15.0	mg/kg	01.04.19 01.00		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.04.19 01.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.04.19 01.00	U	1
Total TPH	PHC635	**18.8**	15.0	mg/kg	01.04.19 01.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.04.19 01.00	
o-Terphenyl	84-15-1	113	%	70-135	01.04.19 01.00	

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-002	Date Collected:	12.20.18 10.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.02.19 08.30	Basis:	Wet Weight
Seq Number:	3074614				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.02.19 14.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.02.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.02.19 14.58	
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.02.19 14.58	

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-003	Date Collected:	12.20.18 10.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.03.19 10.30	Basis:	Wet Weight
Seq Number:	3074716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	01.03.19 20.23	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.19 17.00	Basis:	Wet Weight
Seq Number:	3074784				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.04.19 01.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.04.19 01.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.04.19 01.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.04.19 01.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.04.19 01.20	
o-Terphenyl	84-15-1	83	%	70-135	01.04.19 01.20	

Certificate of Analytical Results 609804

LT Environmental, Inc., Arvada, CO

PLU 387H

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	12.27.18 11.36
Lab Sample Id:	609804-003	Date Collected:	12.20.18 10.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.02.19 08.30	Basis:	Wet Weight
Seq Number:	3074614				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.02.19 15.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.02.19 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.02.19 15.20	
1,4-Difluorobenzene	540-36-3	88	%	70-130	01.02.19 15.20	

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 609804

LT Environmental, Inc.

PLU 387H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074716 Matrix: Solid Date Prep: 01.03.19
MB Sample Id: 7669107-1-BLK LCS Sample Id: 7669107-1-BKS LCSD Sample Id: 7669107-1-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	267	107	264	106	90-110	1	20	mg/kg	01.03.19 18:48	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074716 Matrix: Soil Date Prep: 01.03.19
Parent Sample Id: 609803-003 MS Sample Id: 609803-003 S MSD Sample Id: 609803-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.6	251	356	120	360	122	90-110	1	20	mg/kg	01.03.19 19:06	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074716 Matrix: Soil Date Prep: 01.03.19
Parent Sample Id: 609805-001 MS Sample Id: 609805-001 S MSD Sample Id: 609805-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.8	249	277	99	297	107	90-110	7	20	mg/kg	01.03.19 20:36	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3074784 Matrix: Solid Date Prep: 01.02.19
MB Sample Id: 7669207-1-BLK LCS Sample Id: 7669207-1-BKS LCSD Sample Id: 7669207-1-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	795	80	819	82	70-135	3	20	mg/kg	01.03.19 19:59	
Diesel Range Organics (DRO)	<8.13	1000	905	91	914	92	70-135	1	20	mg/kg	01.03.19 19:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		128		129		70-135	%	01.03.19 19:59
o-Terphenyl	104		106		121		70-135	%	01.03.19 19:59

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

QC Summary 609804

LT Environmental, Inc.

PLU 387H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3074784 Matrix: Soil Date Prep: 01.02.19
Parent Sample Id: 609634-040 MS Sample Id: 609634-040 S MSD Sample Id: 609634-040 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	868	87	857	86	70-135	1	20	mg/kg	01.03.19 21:00	
Diesel Range Organics (DRO)	<8.12	999	973	97	976	98	70-135	0	20	mg/kg	01.03.19 21:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	144	**	144	**	70-135	%	01.03.19 21:00
o-Terphenyl	121		120		70-135	%	01.03.19 21:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3074614 Matrix: Solid Date Prep: 01.02.19
MB Sample Id: 7669101-1-BLK LCS Sample Id: 7669101-1-BKS LCSD Sample Id: 7669101-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.118	117	0.121	121	70-130	3	35	mg/kg	01.02.19 09:33	
Toluene	<0.00201	0.101	0.0968	96	0.100	100	70-130	3	35	mg/kg	01.02.19 09:33	
Ethylbenzene	<0.00201	0.101	0.115	114	0.121	121	70-130	5	35	mg/kg	01.02.19 09:33	
m,p-Xylenes	<0.00402	0.201	0.227	113	0.254	127	70-130	11	35	mg/kg	01.02.19 09:33	
o-Xylene	<0.00201	0.101	0.112	111	0.117	117	70-130	4	35	mg/kg	01.02.19 09:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		79		99		70-130	%	01.02.19 09:33
4-Bromofluorobenzene	103		89		71		70-130	%	01.02.19 09:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3074614 Matrix: Soil Date Prep: 01.02.19
Parent Sample Id: 609765-001 MS Sample Id: 609765-001 S MSD Sample Id: 609765-001 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	0.127	127	0.102	102	70-130	22	35	mg/kg	01.02.19 10:44	
Toluene	<0.00200	0.100	0.101	101	0.0834	83	70-130	19	35	mg/kg	01.02.19 10:44	
Ethylbenzene	<0.00200	0.100	0.126	126	0.109	109	70-130	14	35	mg/kg	01.02.19 10:44	
m,p-Xylenes	<0.00400	0.200	0.264	132	0.217	109	70-130	20	35	mg/kg	01.02.19 10:44	X
o-Xylene	<0.00200	0.100	0.123	123	0.100	100	70-130	21	35	mg/kg	01.02.19 10:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		85		70-130	%	01.02.19 10:44
4-Bromofluorobenzene	80		82		70-130	%	01.02.19 10:44

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

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #: | Xenco Job #: 160984

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. Permian Office
Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abaker@ltenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Lynda Lambert

Project Information

Project Name/Number: PLU 3871H
Project Location: EDDY, NM 2RP-4056
Invoice To: XTO Energy - Kyle Littrell
PO Number:

Analytical Information

BTEX (only BTEX) 8021
TPH (DRO, GRO, MRO) 8015
Chloride (300.00)

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	SS03A	4'	12/20	10:00	S	1								X	X	X	X	
2	SS04A	4'	↓	10:25	S	1								X	X	X	X	
3	SS01A	4'	↓	10:40	S	1								X	X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Number of Containers / Preservative

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

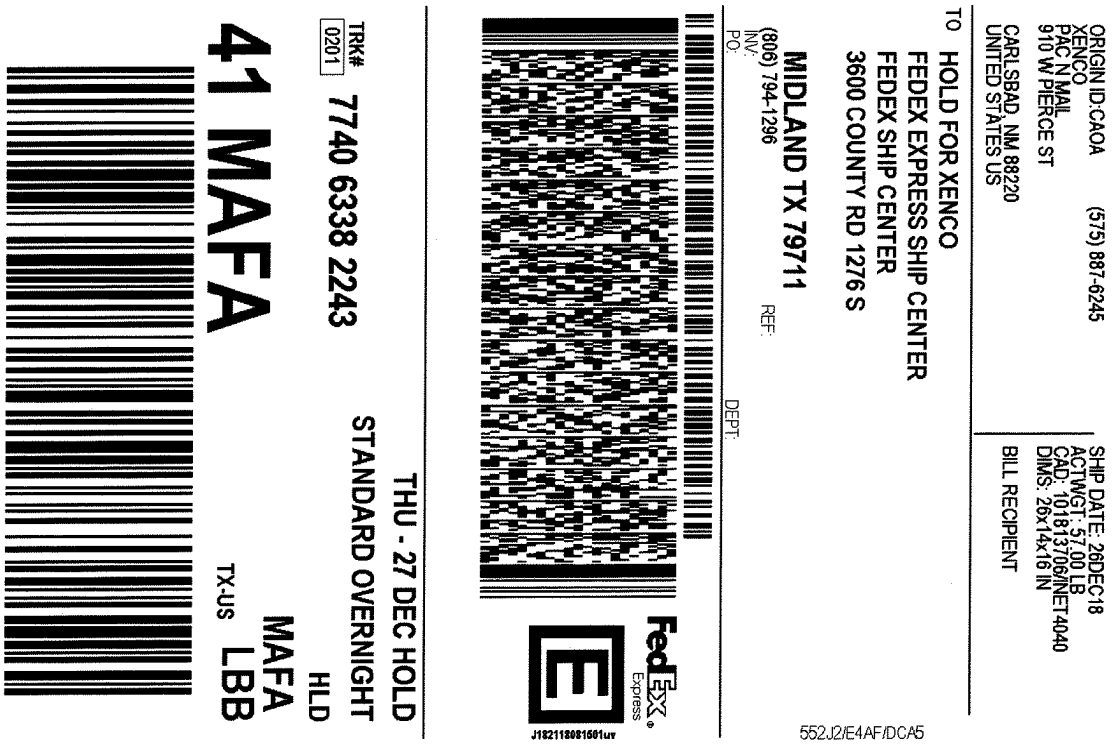
Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/20/2018 1800	1	2	14:30 12/21/18	2
3	Relinquished By:	Date Time: 15:30	Received By: 3 12/21/18	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5 1136	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp: 0.3 | Thermo. Corr. Factor: 0.0



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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/27/2018 11:36:00 AM

Work Order #: 609804

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12/27/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/27/2018

Jessica Kramer

ATTACHMENT 4: PHOTOGRAPHIC LOG

View east of process equipment.

Project: 012918090	XTO Energy, Inc. Poker Lake Unit 387H	Advancing Opportunity
December 26, 2018	Photographic Log	

View north of heater treater area.

Project: 012918090	XTO Energy, Inc. Poker Lake Unit 387H	Advancing Opportunity
December 26, 2018	Photographic Log	

View east of heater treater area.

Project: 012918090	XTO Energy, Inc. Poker Lake Unit 387H	Advancing Opportunity
December 26, 2018	Photographic Log	

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

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

CONDITIONS

Action 194080

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 194080
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	3/7/2023