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

October 17, 2019

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

RE: Closure Request
Poker Lake Unit #144 Flowline
Remediation Permit Number 2RP-3067
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Poker Lake Unit (PLU) #144 Flowline (Site) in Unit E, Section 32, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil at the Site.

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

RELEASE BACKGROUND

On June 15, 2015, corrosion in the PLU #144 flowline resulted in the release of 6 barrels (bbls) of crude oil. The release impacted approximately 1,200 square feet of caliche well pad around the production equipment at the PLU #140 battery. A vacuum truck recovered approximately 1 bbl of free-standing fluid. 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 June 22, 2015, and was assigned Remediation Permit (RP) Number 2RP-3067 (Attachment 1).

Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release event.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) Well 321544103523701, located approximately 10,584 feet east of the Site. The water well has a depth to groundwater of 490 feet and a total depth of 696 feet. Ground surface elevation at the water well location is 3,416 feet above mean sea level (AMSL), which is approximately 226 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 180 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a high-potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH): 100 mg/kg; and
- Chloride: 600 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On February 14, 2018, LTE personnel inspected the Site to evaluate the release extent. Hydrocarbon staining was observed in the release area around the active production equipment. An LTE scientist collected five preliminary soil samples (SS01 through SS05) within the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 1 foot bgs. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO),

TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

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

Boreholes were advanced via hand auger at five locations within the release area to assess for soil impacts. Boreholes BH01 through BH05 were advanced to a depth of 4 feet or 4.5 feet bgs. Two delineation soil samples were collected from each borehole from depths ranging from 1 foot to 4.5 feet bgs. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each borehole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The borehole delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by visual observations, potholing activities, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth ranging from 4 feet to 8 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW06 were collected from the sidewalls of the excavation from depths ranging from 0.5 feet to 8 feet bgs. Composite soil samples FS01 through FS06, FS04A, and FS06A were collected from the floor of the excavation from depths ranging from 4 feet to 8 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 4.

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

The excavation measured approximately 1,185 square feet in area. A total of approximately 265 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS02, SS04, and SS05. Laboratory analytical results indicated that chloride and/or TPH concentrations exceeded the Closure

Criteria in preliminary soil samples SS01 and SS03. Based on the preliminary soil sample analytical results, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH04, indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples (BH05/BH05A), collected from borehole BH05, indicated that TPH or chloride concentrations exceeded the Closure Criteria. Impacted soil was excavated and laboratory analytical results for excavation soil samples SW01 through SW06, FS01 through FS03, FS04A, FS05, and FS06A, collected from the final excavation extent, indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation floor samples FS04 and FS06 initially exceeded the Closure Criteria for TPH. Additional soil was removed from the floor of the excavation and subsequent floor samples FS04A and FS06A were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Delineation and excavation activities were conducted to address impacts to soil resulting from a historical release of crude oil at the Site. Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH04 indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. The impacted soil identified in preliminary soil samples SS01 and SS03 and delineation soil samples BH05 and BH05A was excavated. Laboratory analytical results for excavation soil samples SW01 through SW06, FS01 through FS03, FS04A, FS05, and FS06A, collected from the final excavation extent, indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-3067. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3067)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

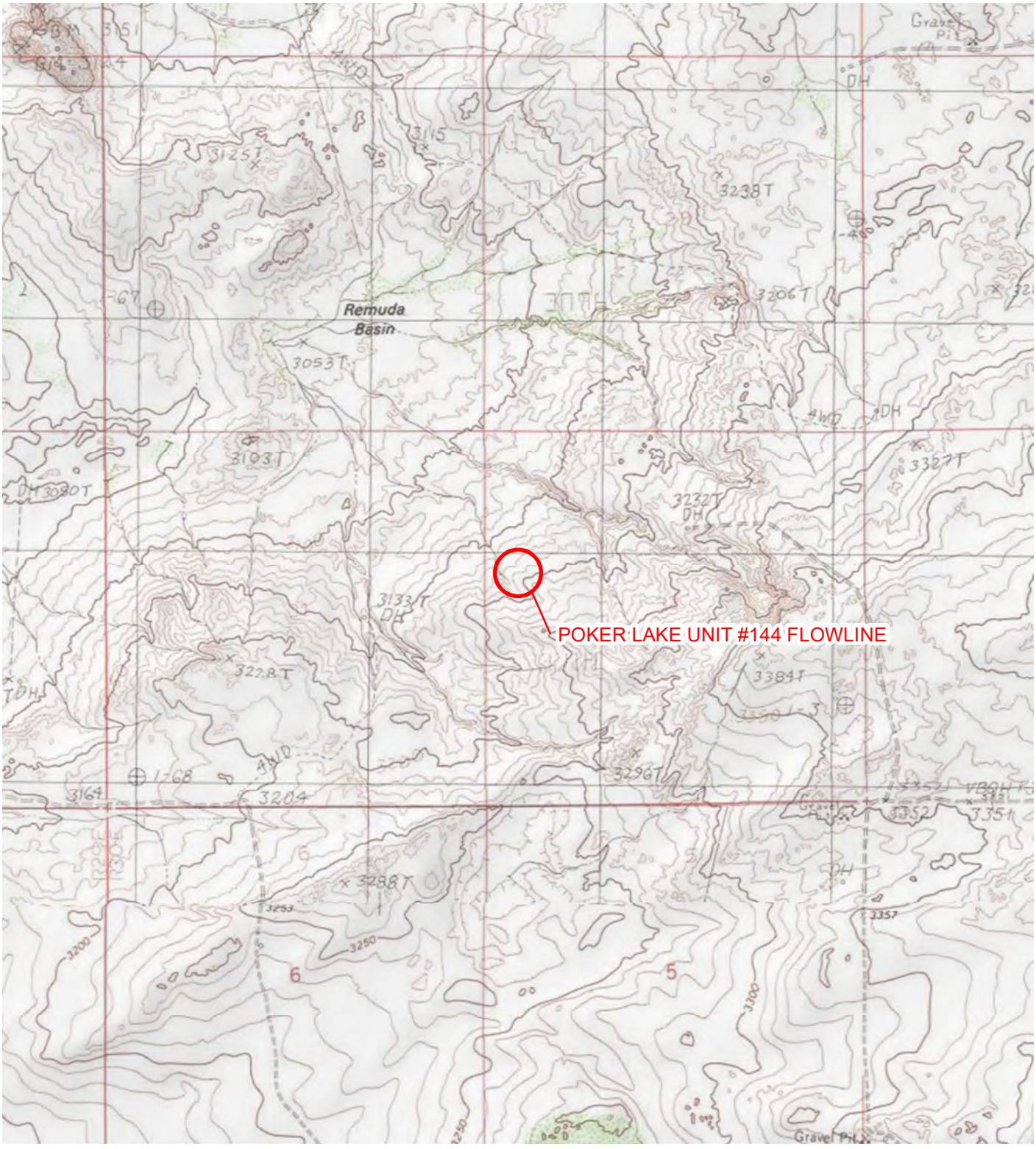


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

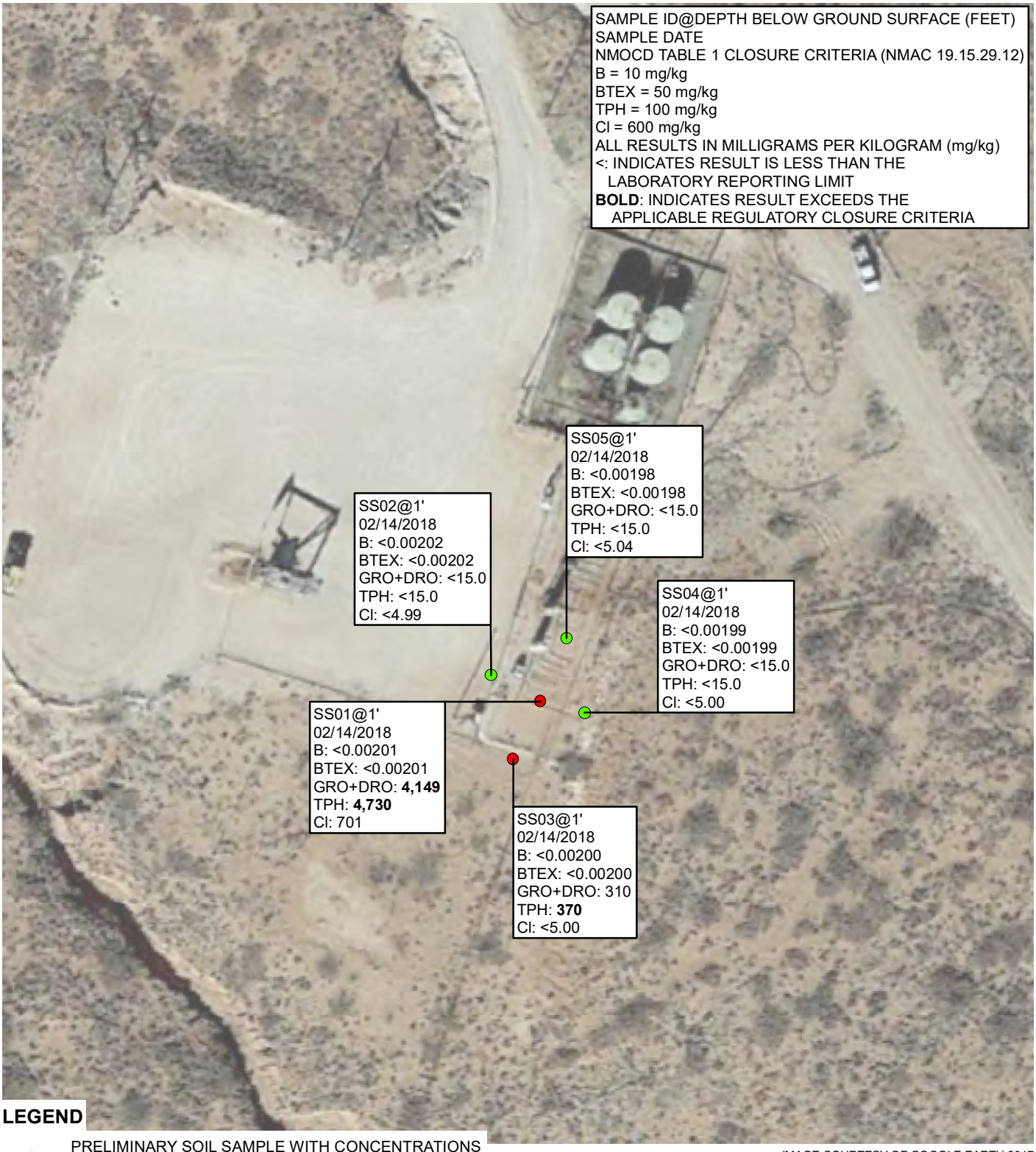
Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-3067

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT #144 FLOWLINE
UNIT E SEC 32 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918047_PLU 144 FLOWLINE\012918047_FIG01_SL_2018.mxd



LEGEND

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

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-3067

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #144 FLOWLINE
UNIT E SEC 32 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918047_PLU 144 FLOWLINE\012918047_FIG02_PRELIMINARY_3067.mxd

LEGEND

IMAGE COURTESY OF GOOGLE EARTH 2017

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSUR CRITERIA
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-3067

0 40 80
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #144 FLOWLINE
UNIT E SEC 32 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918047_PLU 144 FLOWLINE\012918047_FIG04_DELINEATION_3067.mxd

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

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

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-3067

0 40 80
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #144 FLOWLINE
UNIT E SEC 32 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918047_PLU 144 FLOWLINE\012918047_FIG03_EXCAVATION_3067.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #144 FLOWLINE
REMEDIATION PERMIT NUMBER 2RP-3067
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	1	02/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	79.3	4,070	579	4,149	**4,730**	**701**
SS02	1	02/14/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS03	1	02/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	310	59.5	310	**370**	<5.00
SS04	1	02/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS05	1	02/14/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
BH01	2	06/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	25.3	<15.0	25.3	25.3	48.7
BH01A	4	06/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	49.9	<15.0	49.9	49.9	230
BH02	1	06/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	42.2
BH02A	4	06/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	101
BH03	1	06/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	72.9
BH03A	4.5	06/24/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<15.0	<15.0	<15.0	<15.0	<15.0	33.4
BH04	1	06/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	330
BH04A	4	06/24/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<15.0	37.1	<15.0	37.1	37.1	403
BH05	1	06/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	15.4	892	114	907	**1,020**	440
BH05A	4.5	06/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	53.6	23.3	53.6	76.9	**659**
FS01	4	7/18/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	44.6	<15.0	44.6	44.6	130
FS02	4	7/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	35.3	<15.0	35.3	35.3	139
FS03	4-6	7/18/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	94.0	<15.0	94.0	94.0	154
FS04	4-6	7/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	150	<15.0	150	**150**	359
FS04A	8	7/25/2019	<0.00198	<0.00198	<0.00198	0.00755	0.00755	<15.0	<15.0	<15.0	<15.0	<15.0	10.1
FS05	6-8	7/18/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	96.5	<15.0	96.5	96.5	372
FS06	4-6	7/18/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	297	22.4	297	**319**	152
FS06A	7	7/25/2019	<0.00201	<0.00201	<0.00201	0.00285	0.00285	<15.0	<15.0	<15.0	<15.0	<15.0	38.4
SW01	0.5-4	7/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	63.3	17.1	80.4	63.3	67.1
SW02	0.5-4	7/18/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	32.0
SW03	0.5-6	7/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	16.6
SW04	0.5-8	7/18/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	191
SW05	0.5-8	7/18/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	38.3	<15.0	38.3	38.3	180
SW06	0.5-6	7/18/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total x
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3067)

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

nAB1517058134 2RP-3067

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 2RP-3067	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU #144 Flowline; The flow line spill was located on the PLU #140 Tank Battery pad	Facility Type: Exploration and Production

Surface Owner: State	Mineral Owner:	API No. 30-015-30541

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	32	23S	30E					Eddy

Latitude: N 32.26294° **Longitude:** W 103.91075°

NATURE OF RELEASE

Type of Release: crude oil	Volume of Release: 6 bbls	Volume Recovered: 1 bbl
Source of Release: flow line	Date and Hour of Occurrence: 6/15/15 @ unknown	Date and Hour of Discovery: 6/15/15 @ 1:30 pm
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: Not Applicable	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 22 2015
RECEIVED

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

Describe Cause of Problem and Remedial Action Taken.*
Corrosion caused a release of oil from the #144 flowline. Flow path from the release gathered around production equipment on the PLU #140 Battery.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 1,200 sq. ft. of caliche on the PLU 140 tank battery pad. A vacuum truck was called and recovered 1 bbl of oil. The area will be remediated in accordance to the NMOCD and BLM guidelines for spill remediation.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Bradley Blevins	Approved by Environmental Specialist:
Title: Assistant Remediation Foreman	Approval Date: 6/25/15 Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: Attached ☐
Date: Phone: 432-214-3704	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/30/15

* Attach Additional Sheets If Necessary

2RP-3067

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	2RP-3067
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-3067
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.26294 Longitude -103.91075
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit #144 Flowline	Site Type Exploration and Production
Date Release Discovered 6/15/2015	API# *(if applicable)* 30-015-30541

Unit Letter	Section	Township	Range	County
E	32	23S	30E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 6	Volume Recovered (bbls) 1
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Corrosion caused a release of oil from the PLU #144 flowline. Flow path from the release gathered around production equipment. The spill impacted approximately 1,200 sq. ft. of caliche on the PLU 140 tank battery pad. A vacuum truck was called and recovered 1 bbl of oil.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3067
Facility ID	
Application ID	

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

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/19/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3067
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-3067
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/19/2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3067
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/19/2019

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: Brittany Hall Date: 2/21/2023

Printed Name: Brittany Hall Title: Environmental Specialist

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

Identifier:	Date:
BH01	6/24/19
Project Name:	**RP Number:**
PLU 144 @ PLU 140	2RP-3067

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
A Byers	Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.263054, -103.910689	PID / Cl⁻ test strips	2.5"	4.0'

Comments: 60% error calc ppm (Cl⁻)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			Y		0	surface		
M	<172	~~1.4~~	N		1	1'	SP SM	poorly graded, brown sand (m.) with silt, no plasticity
M	<172	1.4 ~~0.5~~	N	BH01	2	2'	SP SM	
					3			
M	172	0.5	N	BH01A	4	4'	SP SM	
					5			TOT DEPTH
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH02	6/24/19
Project Name:	RP Number:
PLU 144 @ PLU 140	2RP-3067
Logged By: A Byers	Method: Hand Auger
Hole Diameter: 2.5"	Total Depth: 4.0'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.263070, -103.910752
Field Screening: PID / Cl⁻ test strips
Comments: 60% error cale. ppm (Cl⁻)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1725 M	<192.8	6.9	N	BH02	0–1	1.0'	SP-SM	poorly graded, brown sand (m.) with silt, no plasticity
M	<192.8	9.8	N		3	3'		
1745 M	<192.8	5.8	N	BH02A	4	4.0'		
					5			TOT DEPTH
					6–12			

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

Identifier:	Date:
BH03	6/24/19
Project Name:	**RP Number:**
PLU 144 @ PLU 140	2RP-3067

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
A Byers	Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.263097, -103.910673	PID / Cl⁻ test strips	2.5"	4.5'

Comments: 60% error calc. ppm (Cl⁻)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1825 M	<192.8	16.3	N	BH03	1	1'	SP-SM	poorly graded, brown sand (m.) with silt, no plasticity
M					2			
1830 M		14.4	N		3	3'		
					4			
1835 M		5.0	N	BH03A		4.5'		
					5			TOT DEPTH
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH04	6/24/19
Project Name:	RP Number:
PLU 144 @ PLU 140	2RP-3067
Logged By: A Byers	Method: Hand Auger
Hole Diameter: 2.5"	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.262994, -103.960711
Field Screening: PID / Cl⁻ test strips

Comments: 60% error calc ppm (Cl⁻)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1315 M	512	0.5	N	BH04	1	1'	SP-SM	poorly graded brown, sand (fn.) with silt, no plasticity
M	384	0.7	N		2	2'		
1329 M	384	0.6	N	BH04A	4	4'		TOT DEPTH

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

Identifier:	Date:
BH05	6/24/19
Project Name:	RP Number:
PLU 144 @ PLU 140	2RP-3067
Logged By: A Byers	Method: Hand Auger
Hole Diameter: 2.5"	Total Depth: 4.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.262965, -103.910733
Field Screening: PID / Cl⁻ test strips
Comments: 60% error calc. ppm (Cl⁻)

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1845	M	(32)	111.2	Y	BH05	1	1'	SP-SM	poorly graded, brown sand (m.) with silt, no plasticity
1846	M	(3.6)	210.8	N		2	2'	SP-SM	
1847	M	(5.0)	18.3	N		3	3'	SP-SM	
1848	M	(4.4)	27.9	N	BH05@4	4	4.5'	SP-SM	TOT DEATH
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

Southwestern view of the release area prior to equipment removal.

Project: 012918047	XTO Energy, Inc. Poker Lake Unit #144 Flowline	LTE Advancing Opportunity
June 24, 2019	Photographic Log	

Northeastern view of the excavation.

Project: 012918047	XTO Energy, Inc. Poker Lake Unit #144 Flowline	LTE Advancing Opportunity
July 18, 2019	Photographic Log	

Eastern view of the final excavation.

Project: 012918047	XTO Energy, Inc. Poker Lake Unit #144 Flowline	LTE Advancing Opportunity
July 25, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 576501

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 144 Flowline

22-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

22-FEB-18

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

Reference: XENCO Report No(s): **576501**
PLU 144 Flowline
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) 576501. 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. 576501 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
Odessa Laboratory Director

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

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

Sample Cross Reference 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	02-14-18 10:30	12 In	576501-001
SS02	S	02-14-18 10:35	12 In	576501-002
SS03	S	02-14-18 10:40	12 In	576501-003
SS04	S	02-14-18 10:45	12 In	576501-004
SS05	S	02-14-18 10:50	12 In	576501-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 144 Flowline

Project ID:
Work Order Number(s): *576501*

Report Date: *22-FEB-18*
Date Received: *02/14/2018*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3041450 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3041790 Inorganic Anions by EPA 300
Lab Sample ID 576501-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 576501-001, -002, -003, -004, -005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 576501

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144 Flowline

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Feb-14-18 06:00 pm

Report Date: 22-FEB-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	576501-001		576501-002		576501-003		576501-004		576501-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	12- In		12- In		12- In		12- In		12- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-14-18 10:30		Feb-14-18 10:35		Feb-14-18 10:40		Feb-14-18 10:45		Feb-14-18 10:50	
BTEX by EPA 8021B	***Extracted:***	Feb-17-18 08:30		Feb-17-18 08:30		Feb-17-18 08:30		Feb-17-18 08:30		Feb-17-18 08:30	
	Analyzed:	Feb-17-18 22:01		Feb-18-18 01:12		Feb-17-18 22:20		Feb-17-18 22:39		Feb-17-18 22:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00399	0.00399	<0.00398	0.00398	<0.00396	0.00396
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198
Inorganic Anions by EPA 300	***Extracted:***	Feb-21-18 17:00		Feb-21-18 17:00		Feb-21-18 17:00		Feb-21-18 17:00		Feb-21-18 17:00	
	Analyzed:	Feb-22-18 01:40		Feb-22-18 01:45		Feb-22-18 01:50		Feb-22-18 02:06		Feb-22-18 02:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		701	5.01	<4.99	4.99	<5.00	5.00	<5.00	5.00	<5.04	5.04
TPH by SW8015 Mod	***Extracted:***	Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00	
	Analyzed:	Feb-18-18 15:05		Feb-18-18 15:26		Feb-18-18 16:28		Feb-18-18 16:49		Feb-18-18 17:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		79.3	74.8	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		4070	74.8	<15.0	15.0	310	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		579	74.8	<15.0	15.0	59.5	15.0	<15.0	15.0	<15.0	15.0
Total TPH		4730	74.8	<15.0	15.0	370	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Odessa Laboratory Director

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-001	Date Collected:	02.14.18 10.30	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.21.18 17.00	Basis:	Wet Weight
Seq Number:	3041790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**701**	5.01	mg/kg	02.22.18 01.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**79.3**	74.8	mg/kg	02.18.18 15.05		5
Diesel Range Organics (DRO)	C10C28DRO	**4070**	74.8	mg/kg	02.18.18 15.05		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**579**	74.8	mg/kg	02.18.18 15.05		5
Total TPH	PHC635	**4730**	74.8	mg/kg	02.18.18 15.05		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.18.18 15.05	
o-Terphenyl	84-15-1	97	%	70-135	02.18.18 15.05	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-001	Date Collected:	02.14.18 10.30	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.17.18 08.30	Basis:	Wet Weight
Seq Number:	3041450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.17.18 22.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.17.18 22.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	80-120	02.17.18 22.01	
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.17.18 22.01	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-002	Date Collected:	02.14.18 10.35	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.21.18 17.00	Basis:	Wet Weight
Seq Number:	3041790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.22.18 01.45	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 15.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 15.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.18.18 15.26	
o-Terphenyl	84-15-1	91	%	70-135	02.18.18 15.26	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-002	Date Collected:	02.14.18 10.35	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.17.18 08.30	Basis:	Wet Weight
Seq Number:	3041450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.18.18 01.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.18.18 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.18.18 01.12	
4-Bromofluorobenzene	460-00-4	98	%	80-120	02.18.18 01.12	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-003	Date Collected:	02.14.18 10.40	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.21.18 17.00	Basis:	Wet Weight
Seq Number:	3041790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.22.18 01.50	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 16.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**310**	15.0	mg/kg	02.18.18 16.28		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**59.5**	15.0	mg/kg	02.18.18 16.28		1
Total TPH	PHC635	**370**	15.0	mg/kg	02.18.18 16.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.18.18 16.28	
o-Terphenyl	84-15-1	102	%	70-135	02.18.18 16.28	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-003	Date Collected:	02.14.18 10.40	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.17.18 08.30	Basis:	Wet Weight
Seq Number:	3041450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.17.18 22.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.18 22.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	80-120	02.17.18 22.20	
1,4-Difluorobenzene	540-36-3	88	%	80-120	02.17.18 22.20	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-004	Date Collected:	02.14.18 10.45	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.21.18 17.00	Basis:	Wet Weight
Seq Number:	3041790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.22.18 02.06	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 16.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 16.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 16.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 16.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.18.18 16.49	
o-Terphenyl	84-15-1	94	%	70-135	02.18.18 16.49	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-004	Date Collected:	02.14.18 10.45	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.17.18 08.30	Basis:	Wet Weight
Seq Number:	3041450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.17.18 22.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.17.18 22.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	80-120	02.17.18 22.39	
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.17.18 22.39	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-005	Date Collected:	02.14.18 10.50	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.21.18 17.00	Basis:	Wet Weight
Seq Number:	3041790				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	02.22.18 02.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 17.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 17.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 17.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 17.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.18.18 17.09	
o-Terphenyl	84-15-1	99	%	70-135	02.18.18 17.09	

Certificate of Analytical Results 576501

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576501-005	Date Collected:	02.14.18 10.50	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.17.18 08.30	Basis:	Wet Weight
Seq Number:	3041450				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.17.18 22.58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.17.18 22.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	80-120	02.17.18 22.58	
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.17.18 22.58	

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

+ NELAC certification not offered for this compound.

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

QC Summary 576501

LT Environmental, Inc.

PLU 144 Flowline

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041790 Matrix: Solid Date Prep: 02.21.18
MB Sample Id: 7639564-1-BLK LCS Sample Id: 7639564-1-BKS LCSD Sample Id: 7639564-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	273	109	90-110	0	20	mg/kg	02.22.18 00:25	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041790 Matrix: Soil Date Prep: 02.21.18
Parent Sample Id: 576500-005 MS Sample Id: 576500-005 S MSD Sample Id: 576500-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	126	245	369	99	390	108	90-110	6	20	mg/kg	02.22.18 00:41	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041790 Matrix: Soil Date Prep: 02.21.18
Parent Sample Id: 576501-003 MS Sample Id: 576501-003 S MSD Sample Id: 576501-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	277	111	274	110	90-110	1	20	mg/kg	02.22.18 01:55	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3041595 Matrix: Solid Date Prep: 02.18.18
MB Sample Id: 7639459-1-BLK LCS Sample Id: 7639459-1-BKS LCSD Sample Id: 7639459-1-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	865	87	995	100	70-135	14	35	mg/kg	02.18.18 14:23	
Diesel Range Organics (DRO)	<15.0	1000	812	81	930	93	70-135	14	35	mg/kg	02.18.18 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		96		101		70-135	%	02.18.18 14:23
o-Terphenyl	103		91		101		70-135	%	02.18.18 14:23

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
E = MSD/LCSD Result

QC Summary 576501

LT Environmental, Inc.

PLU 144 Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3041595 — Matrix: Soil — Date Prep: 02.18.18
Parent Sample Id: 576501-002 — MS Sample Id: 576501-002 S — MSD Sample Id: 576501-002 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	998	1020	102	992	99	70-135	3	35	mg/kg	02.18.18 15:48	
Diesel Range Organics (DRO)	<15.0	998	919	92	846	85	70-135	8	35	mg/kg	02.18.18 15:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		104		70-135	%	02.18.18 15:48
o-Terphenyl	108		97		70-135	%	02.18.18 15:48

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3041450 — Matrix: Solid — Date Prep: 02.17.18
MB Sample Id: 7639379-1-BLK — LCS Sample Id: 7639379-1-BKS — LCSD Sample Id: 7639379-1-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	0.0838	84	0.0801	80	70-130	5	35	mg/kg	02.17.18 18:53	
Toluene	<0.00200	0.100	0.0881	88	0.0845	85	70-130	4	35	mg/kg	02.17.18 18:53	
Ethylbenzene	<0.00200	0.100	0.0969	97	0.0937	94	71-129	3	35	mg/kg	02.17.18 18:53	
m,p-Xylenes	<0.00401	0.200	0.192	96	0.185	93	70-135	4	35	mg/kg	02.17.18 18:53	
o-Xylene	<0.00200	0.100	0.0962	96	0.0924	93	71-133	4	35	mg/kg	02.17.18 18:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		87		92		80-120	%	02.17.18 18:53
4-Bromofluorobenzene	100		111		117		80-120	%	02.17.18 18:53

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3041450 — Matrix: Soil — Date Prep: 02.17.18
Parent Sample Id: 576501-002 — MS Sample Id: 576501-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0765	77	70-130	mg/kg	02.17.18 19:29	
Toluene	<0.00200	0.0998	0.0743	74	70-130	mg/kg	02.17.18 19:29	
Ethylbenzene	<0.00200	0.0998	0.0790	79	71-129	mg/kg	02.17.18 19:29	
m,p-Xylenes	<0.00399	0.200	0.153	77	70-135	mg/kg	02.17.18 19:29	
o-Xylene	<0.00200	0.0998	0.0802	80	71-133	mg/kg	02.17.18 19:29	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		80-120	%	02.17.18 19:29
4-Bromofluorobenzene	115		80-120	%	02.17.18 19:29

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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

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

Final 1.000

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

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 576501

Client / Reporting Information

Company Name / Branch: LTE / Permian

Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705

Email: Abaker@ltenv.com

Phone No: 432-704-5178

Project Contact: Adrian Baker

Samplers's Name: ~~Aaron Williamson~~

Project Information

Project Name/Number: PLU 144 Flowline

Project Location: NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 30-015-37030

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	Date	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	SS01	12"	2-14-18	10:30	S	1								X	X	X	X	
2	SS02	↓	↓	10:35	↓	↓								↓	↓	↓	↓	
3	SS03			10:40														
4	SS04			10:45														
5	SS05			10:50														
6																		
7																		
8																		
9																		
10																		

Temp: 3.9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.7

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY
- ☒ STANDARD TAT

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:

Sampler Danny Burns
API: 30-015-37030
2RP-3067

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		2-14-18	1	2	2-14-18 18:00	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time: 2-14-18 18:00	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ☒ Cooler Temp. Thermo. Corr. Factor

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/14/2018 06:00:00 PM

Work Order #: 576501

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.7
#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: 02/15/2018

Connie Hernandez

Checklist reviewed by: Jessica Kramer Date: 02/15/2018

Jessica Kramer

Analytical Report 629137

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU 144 Flowline @ PLU 140

07-JUL-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

07-JUL-19

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

Reference: XENCO Report No(s): **629137**
PLU 144 Flowline @ PLU 140
Project Address: Delaware Basin

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 629137. 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. 629137 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 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	06-24-19 17:42	2 ft	629137-001
BH01A	S	06-24-19 17:47	4 ft	629137-002
BH02	S	06-24-19 17:25	1 ft	629137-003
BH02A	S	06-24-19 17:45	4 ft	629137-004
BH03	S	06-24-19 18:25	1 ft	629137-005
BH03A	S	06-24-19 18:35	4.5 ft	629137-006
BH04	S	06-24-19 18:15	1 ft	629137-007
BH04A	S	06-24-19 18:29	4 ft	629137-008
BH05	S	06-24-19 18:45	1 ft	629137-009
BH05A	S	06-24-19 18:48	4.5 ft	629137-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 144 Flowline @ PLU 140

Project ID:
Work Order Number(s): *629137*

Report Date: *07-JUL-19*
Date Received: *06/26/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093881 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 629137-001 S,629137-001 SD,629137-010,629137-005,629137-006,629137-007,629137-002,629137-001,629137-003.

Batch: LBA-3094217 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3094559 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 629137

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144 Flowline @ PLU 140

Project Id:

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-26-19 01:10 pm

Report Date: 07-JUL-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	629137-001		629137-002		629137-003		629137-004		629137-005		629137-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	2- ft		4- ft		1- ft		4- ft		1- ft		4.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-19 17:42		Jun-24-19 17:47		Jun-24-19 17:25		Jun-24-19 17:45		Jun-24-19 18:25		Jun-24-19 18:35	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-01-19 17:00		Jul-01-19 17:00		Jul-01-19 17:00		Jul-01-19 17:00		Jul-01-19 17:40		Jul-01-19 17:40	
	Analyzed:	Jul-02-19 06:50		Jul-02-19 07:12		Jul-02-19 07:34		Jul-02-19 07:56		Jul-05-19 22:07		Jul-05-19 22:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
m,p-Xylenes		<0.00396	0.00396	<0.00399	0.00399	<0.00399	0.00399	<0.00395	0.00395	<0.00400	0.00400	<0.00394	0.00394
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00197	0.00197
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jun-28-19 08:30		Jun-28-19 08:30		Jun-28-19 08:30		Jun-28-19 08:30		Jun-28-19 08:30		Jun-28-19 08:30	
	Analyzed:	Jun-28-19 11:47		Jun-28-19 11:52		Jun-28-19 11:57		Jun-28-19 12:02		Jun-28-19 12:07		Jun-28-19 12:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		48.7	5.00	230	5.00	42.2	5.00	101	5.00	72.9	5.00	33.4	5.00
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00	
	Analyzed:	Jun-28-19 00:15		Jun-28-19 01:31		Jun-28-19 01:56		Jun-28-19 02:21		Jun-28-19 02:46		Jun-28-19 03:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		25.3	15.0	49.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		25.3	15.0	49.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		25.3	15.0	49.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 629137

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144 Flowline @ PLU 140

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

Date Received in Lab: Wed Jun-26-19 01:10 pm
Report Date: 07-JUL-19
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	629137-007		629137-008		629137-009		629137-010							
	Field Id:	BH04		BH04A		BH05		BH05A							
	Depth:	1- ft		4- ft		1- ft		4.5- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Jun-24-19 18:15		Jun-24-19 18:29		Jun-24-19 18:45		Jun-24-19 18:48							
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-01-19 17:40		Jul-01-19 17:40		Jul-01-19 17:40		Jul-01-19 17:40							
	Analyzed:	Jul-05-19 22:51		Jul-05-19 23:13		Jul-05-19 23:35		Jul-05-19 23:57							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
Toluene		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
Ethylbenzene		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
m,p-Xylenes		<0.00398	0.00398	<0.00394	0.00394	<0.00401	0.00401	<0.00398	0.00398						
o-Xylene		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
Total Xylenes		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
Total BTEX		<0.00199	0.00199	<0.00197	0.00197	<0.00200	0.00200	<0.00199	0.00199						
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jun-27-19 16:25		Jun-27-19 16:25		Jun-27-19 16:25		Jun-27-19 16:25							
	Analyzed:	Jun-27-19 17:24		Jun-27-19 17:40		Jun-27-19 17:46		Jun-27-19 17:51							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		330	5.00	403	5.00	440	5.00	659	5.00						
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00		Jun-27-19 15:00							
	Analyzed:	Jun-28-19 03:35		Jun-28-19 04:00		Jun-28-19 04:25		Jun-28-19 04:50							
	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	15.4	15.0	<14.9	14.9						
Diesel Range Organics (DRO)		<15.0	15.0	37.1	15.0	892	15.0	53.6	14.9						
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	114	15.0	23.3	14.9						
Total TPH		<15.0	15.0	37.1	15.0	1020	15.0	76.9	14.9						
Total GRO-DRO		<15.0	15.0	37.1	15.0	907	15.0	53.6	14.9						

Jessica Kramer
Project Assistant

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-001	Date Collected:	06.24.19 17.42	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**48.7**	5.00	mg/kg	06.28.19 11.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 00.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**25.3**	15.0	mg/kg	06.28.19 00.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 00.15	U	1
Total TPH	PHC635	**25.3**	15.0	mg/kg	06.28.19 00.15		1
Total GRO-DRO	PHC628	**25.3**	15.0	mg/kg	06.28.19 00.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.28.19 00.15	
o-Terphenyl	84-15-1	57	%	70-135	06.28.19 00.15	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-001	Date Collected:	06.24.19 17.42	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	FOV	Date Prep:	07.01.19 17.00	Basis:	Wet Weight
Seq Number:	3094217			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.02.19 06.50	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.02.19 06.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.02.19 06.50	
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.02.19 06.50	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-002	Date Collected:	06.24.19 17.47	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	5.00	mg/kg	06.28.19 11.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**49.9**	15.0	mg/kg	06.28.19 01.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 01.31	U	1
Total TPH	PHC635	**49.9**	15.0	mg/kg	06.28.19 01.31		1
Total GRO-DRO	PHC628	**49.9**	15.0	mg/kg	06.28.19 01.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.28.19 01.31	
o-Terphenyl	84-15-1	68	%	70-135	06.28.19 01.31	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-002	Date Collected:	06.24.19 17.47	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	FOV	Date Prep:	07.01.19 17.00	Basis:	Wet Weight
Seq Number:	3094217			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.02.19 07.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.02.19 07.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.02.19 07.12	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.02.19 07.12	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-003	Date Collected:	06.24.19 17.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.2**	5.00	mg/kg	06.28.19 11.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 01.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 01.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 01.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 01.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 01.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.28.19 01.56	
o-Terphenyl	84-15-1	58	%	70-135	06.28.19 01.56	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-003	Date Collected:	06.24.19 17.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	FOV	Date Prep:	07.01.19 17.00	Basis:	Wet Weight
Seq Number:	3094217			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.02.19 07.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.02.19 07.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.02.19 07.34	
4-Bromofluorobenzene	460-00-4	117	%	70-130	07.02.19 07.34	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-004	Date Collected:	06.24.19 17.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	5.00	mg/kg	06.28.19 12.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 02.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 02.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 02.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 02.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 02.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.28.19 02.21	
o-Terphenyl	84-15-1	71	%	70-135	06.28.19 02.21	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-004	Date Collected:	06.24.19 17.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	FOV	Date Prep:	07.01.19 17.00	Basis:	Wet Weight
Seq Number:	3094217			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	07.02.19 07.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.02.19 07.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.02.19 07.56	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.02.19 07.56	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-005	Date Collected:	06.24.19 18.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.9**	5.00	mg/kg	06.28.19 12.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 02.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 02.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 02.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 02.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 02.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.28.19 02.46	
o-Terphenyl	84-15-1	63	%	70-135	06.28.19 02.46	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-005	Date Collected:	06.24.19 18.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.05.19 22.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.05.19 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.05.19 22.07	
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.05.19 22.07	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-006	Date Collected:	06.24.19 18.35	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 08.30	Basis:	Wet Weight
Seq Number:	3093973			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.4**	5.00	mg/kg	06.28.19 12.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 03.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 03.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 03.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 03.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 03.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.28.19 03.11	
o-Terphenyl	84-15-1	67	%	70-135	06.28.19 03.11	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-006	Date Collected:	06.24.19 18.35	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	07.05.19 22.29	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1
Total BTEX		<0.00197	0.00197	mg/kg	07.05.19 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.05.19 22.29	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.05.19 22.29	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-007	Date Collected:	06.24.19 18.15	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.27.19 16.25	Basis:	Wet Weight
Seq Number:	3093836			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**330**	5.00	mg/kg	06.27.19 17.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 03.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 03.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 03.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 03.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 03.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.28.19 03.35	
o-Terphenyl	84-15-1	60	%	70-135	06.28.19 03.35	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-007	Date Collected:	06.24.19 18.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.05.19 22.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.05.19 22.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.05.19 22.51	
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.05.19 22.51	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-008	Date Collected:	06.24.19 18.29	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.27.19 16.25	Basis:	Wet Weight
Seq Number:	3093836			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**403**	5.00	mg/kg	06.27.19 17.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 04.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**37.1**	15.0	mg/kg	06.28.19 04.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 04.00	U	1
Total TPH	PHC635	**37.1**	15.0	mg/kg	06.28.19 04.00		1
Total GRO-DRO	PHC628	**37.1**	15.0	mg/kg	06.28.19 04.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.28.19 04.00	
o-Terphenyl	84-15-1	70	%	70-135	06.28.19 04.00	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-008	Date Collected:	06.24.19 18.29	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	07.05.19 23.13	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1
Total BTEX		<0.00197	0.00197	mg/kg	07.05.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	07.05.19 23.13	
1,4-Difluorobenzene	540-36-3	97	%	70-130	07.05.19 23.13	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-009	Date Collected:	06.24.19 18.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.27.19 16.25	Basis:	Wet Weight
Seq Number:	3093836			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**440**	5.00	mg/kg	06.27.19 17.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.4**	15.0	mg/kg	06.28.19 04.25		1
Diesel Range Organics (DRO)	C10C28DRO	**892**	15.0	mg/kg	06.28.19 04.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**114**	15.0	mg/kg	06.28.19 04.25		1
Total TPH	PHC635	**1020**	15.0	mg/kg	06.28.19 04.25		1
Total GRO-DRO	PHC628	**907**	15.0	mg/kg	06.28.19 04.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.28.19 04.25	
o-Terphenyl	84-15-1	73	%	70-135	06.28.19 04.25	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-009	Date Collected:	06.24.19 18.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.05.19 23.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.05.19 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	07.05.19 23.35	
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.05.19 23.35	

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-010	Date Collected:	06.24.19 18.48	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.27.19 16.25	Basis:	Wet Weight
Seq Number:	3093836			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**659**	5.00	mg/kg	06.27.19 17.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.27.19 15.00	Basis:	Wet Weight
Seq Number:	3093881			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.28.19 04.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**53.6**	14.9	mg/kg	06.28.19 04.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**23.3**	14.9	mg/kg	06.28.19 04.50		1
Total TPH	PHC635	**76.9**	14.9	mg/kg	06.28.19 04.50		1
Total GRO-DRO	PHC628	**53.6**	14.9	mg/kg	06.28.19 04.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.28.19 04.50	
o-Terphenyl	84-15-1	60	%	70-135	06.28.19 04.50	**

Certificate of Analytical Results 629137

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @ PLU 140

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629137-010	Date Collected:	06.24.19 18.48	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	FOV			% Moisture:	
Analyst:	AMB	Date Prep:	07.01.19 17.40	Basis:	Wet Weight
Seq Number:	3094559			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.05.19 23.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.05.19 23.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.05.19 23.57	
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.05.19 23.57	

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 629137

LT Environmental, Inc.

PLU 144 Flowline @ PLU 140

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3093836 — Matrix: Solid — Date Prep: 06.27.19
MB Sample Id: 7680925-1-BLK — LCS Sample Id: 7680925-1-BKS — LCSD Sample Id: 7680925-1-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	266	106	90-110	0	20	mg/kg	06.27.19 17:13	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3093973 — Matrix: Solid — Date Prep: 06.28.19
MB Sample Id: 7680927-1-BLK — LCS Sample Id: 7680927-1-BKS — LCSD Sample Id: 7680927-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	247	99	248	99	90-110	0	20	mg/kg	06.28.19 09:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3093836 — Matrix: Soil — Date Prep: 06.27.19
Parent Sample Id: 629137-007 — MS Sample Id: 629137-007 S — MSD Sample Id: 629137-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	330	250	560	92	563	93	90-110	1	20	mg/kg	06.27.19 17:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3093836 — Matrix: Soil — Date Prep: 06.27.19
Parent Sample Id: 629148-007 — MS Sample Id: 629148-007 S — MSD Sample Id: 629148-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	129	250	435	122	434	122	90-110	0	20	mg/kg	06.27.19 18:47	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3093973 — Matrix: Soil — Date Prep: 06.28.19
Parent Sample Id: 629155-002 — MS Sample Id: 629155-002 S — MSD Sample Id: 629155-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	401	250	639	95	639	95	90-110	0	20	mg/kg	06.28.19 10:06	

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 629137

LT Environmental, Inc.

PLU 144 Flowline @ PLU 140

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093973 Matrix: Soil Date Prep: 06.28.19
Parent Sample Id: 629155-011 MS Sample Id: 629155-011 S MSD Sample Id: 629155-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.8	250	277	105	277	105	90-110	0	20	mg/kg	06.28.19 11:13	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093881 Matrix: Solid Date Prep: 06.27.19
MB Sample Id: 7680988-1-BLK LCS Sample Id: 7680988-1-BKS LCSD Sample Id: 7680988-1-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	983	98	1050	105	70-135	7	20	mg/kg	06.27.19 23:24	
Diesel Range Organics (DRO)	<8.13	1000	901	90	998	100	70-135	10	20	mg/kg	06.27.19 23:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		83		92		70-135	%	06.27.19 23:24
o-Terphenyl	72		71		79		70-135	%	06.27.19 23:24

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093881 Matrix: Soil Date Prep: 06.27.19
Parent Sample Id: 629137-001 MS Sample Id: 629137-001 S MSD Sample Id: 629137-001 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)	11.3	999	925	91	945	94	70-135	2	20	mg/kg	06.28.19 00:40	
Diesel Range Organics (DRO)	25.3	999	899	87	931	91	70-135	3	20	mg/kg	06.28.19 00:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		87		70-135	%	06.28.19 00:40
o-Terphenyl	51	**	61	**	70-135	%	06.28.19 00:40

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

QC Summary 629137

LT Environmental, Inc.

PLU 144 Flowline @ PLU 140

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3094217 — Matrix: Solid — Date Prep: 07.01.19
MB Sample Id: 7681230-1-BLK — LCS Sample Id: 7681230-1-BKS — LCSD Sample Id: 7681230-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0988	0.0792	80	0.0900	90	70-130	13	35	mg/kg	07.02.19 04:34	
Toluene	<0.00198	0.0988	0.0781	79	0.0880	88	70-130	12	35	mg/kg	07.02.19 04:34	
Ethylbenzene	<0.00198	0.0988	0.0856	87	0.0961	96	70-130	12	35	mg/kg	07.02.19 04:34	
m,p-Xylenes	<0.00395	0.198	0.172	87	0.195	98	70-130	13	35	mg/kg	07.02.19 04:34	
o-Xylene	<0.00198	0.0988	0.0821	83	0.0952	96	70-130	15	35	mg/kg	07.02.19 04:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		91		98		70-130	%	07.02.19 04:34
4-Bromofluorobenzene	93		99		114		70-130	%	07.02.19 04:34

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3094559 — Matrix: Solid — Date Prep: 07.01.19
MB Sample Id: 7681346-1-BLK — LCS Sample Id: 7681346-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0929	93	70-130	mg/kg	07.05.19 14:36	
Toluene	<0.00200	0.0998	0.0900	90	70-130	mg/kg	07.05.19 14:36	
Ethylbenzene	<0.00200	0.0998	0.0992	99	70-130	mg/kg	07.05.19 14:36	
m,p-Xylenes	<0.00399	0.200	0.201	101	70-130	mg/kg	07.05.19 14:36	
o-Xylene	<0.00200	0.0998	0.0973	97	70-130	mg/kg	07.05.19 14:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		94		70-130	%	07.05.19 14:36
4-Bromofluorobenzene	99		110		70-130	%	07.05.19 14:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3094217 — Matrix: Soil — Date Prep: 07.01.19
Parent Sample Id: 629137-001 — MS Sample Id: 629137-001 S — MSD Sample Id: 629137-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0815	82	0.0810	81	70-130	1	35	mg/kg	07.02.19 05:18	
Toluene	<0.00198	0.0990	0.0784	79	0.0776	78	70-130	1	35	mg/kg	07.02.19 05:18	
Ethylbenzene	<0.00198	0.0990	0.0848	86	0.0830	83	70-130	2	35	mg/kg	07.02.19 05:18	
m,p-Xylenes	<0.00396	0.198	0.169	85	0.165	83	70-130	2	35	mg/kg	07.02.19 05:18	
o-Xylene	<0.00198	0.0990	0.0833	84	0.0810	81	70-130	3	35	mg/kg	07.02.19 05:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		70-130	%	07.02.19 05:18
4-Bromofluorobenzene	113		115		70-130	%	07.02.19 05:18

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 629137

LT Environmental, Inc.

PLU 144 Flowline @ PLU 140

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

Seq Number: 3094559 Matrix: Soil Date Prep: 07.01.19

Parent Sample Id: 628855-001 MS Sample Id: 628855-001 S MSD Sample Id: 628855-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0825	83	0.0875	88	70-130	6	35	mg/kg	07.05.19 14:58	
Toluene	<0.00198	0.0990	0.0795	80	0.0842	85	70-130	6	35	mg/kg	07.05.19 14:58	
Ethylbenzene	<0.00198	0.0990	0.0869	88	0.0883	89	70-130	2	35	mg/kg	07.05.19 14:58	
m,p-Xylenes	<0.00396	0.198	0.174	88	0.180	91	70-130	3	35	mg/kg	07.05.19 14:58	
o-Xylene	<0.00198	0.0990	0.0817	83	0.0862	87	70-130	5	35	mg/kg	07.05.19 14:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		101		70-130	%	07.05.19 14:58
4-Bromofluorobenzene	115		122		70-130	%	07.05.19 14:58

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

Chain of Custody

Work Order No: G29137

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	2T Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	~~Carls~~Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:		Email:	abyers@itenv.com

Work Order Comments

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

Project Name:	PLU 144 to Flaring PLU 140	Turn Around	
Project Number:	012918047	Routine	☐
P.O. Number:	2RP-3067	Rush:	3 day
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	8.8	Thermometer ID		
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	10	

ANALYSIS REQUEST

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	6/24/19	1742	2'	1				
BH01A			1747	4'	1				
BH02			1725	1'	1				
BH02A			1745	4'	1				
BH03			1825	1'	1				
BH03A			1835	4.5'	1				
BH04			1815	1'	1				
BH04A			1829	4'	1				
BH05			1845	1'	1				
BH05A			1848	4.5'	1				

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Anna Byers		06/24/19 12:30	2		06/24/19 13:10
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **42343**

Date/Time: 06/26/19 14:58
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
629137-001	S	BH01	06/24/19 17:42	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-001	S	BH01	06/24/19 17:42	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-001	S	BH01	06/24/19 17:42	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-002	S	BH01A	06/24/19 17:47	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-002	S	BH01A	06/24/19 17:47	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-002	S	BH01A	06/24/19 17:47	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-003	S	BH02	06/24/19 17:25	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-003	S	BH02	06/24/19 17:25	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-003	S	BH02	06/24/19 17:25	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-004	S	BH02A	06/24/19 17:45	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-004	S	BH02A	06/24/19 17:45	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-004	S	BH02A	06/24/19 17:45	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-005	S	BH03	06/24/19 18:25	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-005	S	BH03	06/24/19 18:25	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-005	S	BH03	06/24/19 18:25	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-006	S	BH03A	06/24/19 18:35	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-006	S	BH03A	06/24/19 18:35	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-006	S	BH03A	06/24/19 18:35	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-007	S	BH04	06/24/19 18:15	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-007	S	BH04	06/24/19 18:15	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-007	S	BH04	06/24/19 18:15	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-008	S	BH04A	06/24/19 18:29	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-008	S	BH04A	06/24/19 18:29	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-008	S	BH04A	06/24/19 18:29	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-009	S	BH05	06/24/19 18:45	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **42343**

Date/Time: 06/26/19 14:58
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
629137-009	S	BH05	06/24/19 18:45	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	
629137-009	S	BH05	06/24/19 18:45	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-010	S	BH05A	06/24/19 18:48	SW8015MOD_NM	TPH by SW8015 Mod	06/28/19	07/08/19	JKR	GRO-DRO PHCC10C28 PI	
629137-010	S	BH05A	06/24/19 18:48	E300_CL	Chloride by EPA 300	06/28/19	12/21/19	JKR	CL	
629137-010	S	BH05A	06/24/19 18:48	SW8021B	BTEX by EPA 8021B	06/28/19	07/08/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 06/26/2019

Received By: Brianna Teel

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 42343

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

Sent By: Elizabeth McClellan **Date Sent:** 06/26/2019 02:58 PM

Received By: **Date Received:**

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: _____
Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/26/2019 01:10:00 PM

Work Order #: 629137

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	8.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	Chilling in progress
#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)?	**Yes**	Subbed to Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 06/26/2019

Checklist reviewed by: Jessica Kramer Date: 06/27/2019

Jessica Kramer

Analytical Report 631454

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 144 Flowline @PLU 140

22-JUL-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

22-JUL-19

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

Reference: XENCO Report No(s): **631454**
PLU 144 Flowline @PLU 140
Project Address: Rural Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 631454. 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. 631454 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 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07-18-19 11:00	4 ft	631454-001
FS02	S	07-18-19 11:05	4 ft	631454-002
FS03	S	07-18-19 11:10	4 - 6 ft	631454-003
FS04	S	07-18-19 11:15	4 - 6 ft	631454-004
FS05	S	07-18-19 11:20	6 - 8 ft	631454-005
FS06	S	07-18-19 11:25	4 - 6 ft	631454-006
SW01	S	07-18-19 11:30	0.5 - 4 ft	631454-007
SW02	S	07-18-19 11:35	0.5 - 4 ft	631454-008
SW03	S	07-18-19 11:40	0.5 - 6 ft	631454-009
SW04	S	07-18-19 11:45	0.5 - 8 ft	631454-010
SW05	S	07-18-19 11:50	0.5 - 8 ft	631454-011
SW06	S	07-18-19 11:55	0.5 - 6 ft	631454-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 144 Flowline @PLU 140

Project ID:
Work Order Number(s): *631454*

Report Date: *22-JUL-19*
Date Received: *07/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3095966 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3095967 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 631454

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144 Flowline @PLU 140

Project Id:

Contact: Dan Moir

Project Location: Rural Eddy County

Date Received in Lab: Thu Jul-18-19 03:50 pm

Report Date: 22-JUL-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	631454-001		631454-002		631454-003		631454-004		631454-005		631454-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	4- ft		4- ft		4-6 ft		4-6 ft		6-8 ft		4-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-18-19 11:00		Jul-18-19 11:05		Jul-18-19 11:10		Jul-18-19 11:15		Jul-18-19 11:20		Jul-18-19 11:25	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-19-19 11:25		Jul-19-19 11:25		Jul-19-19 11:25		Jul-19-19 11:25		Jul-19-19 11:25		Jul-19-19 11:25	
	Analyzed:	Jul-20-19 17:06		Jul-20-19 17:26		Jul-20-19 17:47		Jul-20-19 18:07		Jul-20-19 18:27		Jul-20-19 18:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
m,p-Xylenes		<0.00396	0.00396	<0.00401	0.00401	<0.00402	0.00402	<0.00400	0.00400	<0.00397	0.00397	<0.00402	0.00402
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00	
	Analyzed:	Jul-19-19 23:16		Jul-19-19 23:35		Jul-19-19 23:41		Jul-19-19 23:47		Jul-19-19 23:53		Jul-20-19 00:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		130	5.00	139	4.97	154	5.00	359	5.02	372	4.99	152	4.95
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00	
	Analyzed:	Jul-20-19 23:23		Jul-21-19 00:34		Jul-21-19 00:57		Jul-21-19 01:21		Jul-21-19 01:44		Jul-21-19 02:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		44.6	15.0	35.3	15.0	94.0	15.0	150	15.0	96.5	15.0	297	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	22.4	15.0
Total TPH		44.6	15.0	35.3	15.0	94.0	15.0	150	15.0	96.5	15.0	319	15.0
Total GRO-DRO		44.6	15.0	35.3	15.0	94.0	15.0	150	15.0	96.5	15.0	297	15.0

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 631454

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144 Flowline @PLU 140

Project Id:

Contact: Dan Moir

Project Location: Rural Eddy County

Date Received in Lab: Thu Jul-18-19 03:50 pm

Report Date: 22-JUL-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	631454-007		631454-008		631454-009		631454-010		631454-011		631454-012	
	Field Id:	SW01		SW02		SW03		SW04		SW05		SW06	
	Depth:	0.5-4 ft		0.5-4 ft		0.5-6 ft		0.5-8 ft		0.5-8 ft		0.5-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-18-19 11:30		Jul-18-19 11:35		Jul-18-19 11:40		Jul-18-19 11:45		Jul-18-19 11:50		Jul-18-19 11:55	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-19-19 12:10		Jul-19-19 12:10		Jul-19-19 12:10		Jul-19-19 12:10		Jul-19-19 12:10		Jul-19-19 12:10	
	Analyzed:	Jul-21-19 11:51		Jul-21-19 04:40		Jul-21-19 12:11		Jul-21-19 05:20		Jul-21-19 05:40		Jul-21-19 12:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00404	0.00404	<0.00400	0.00400	<0.00398	0.00398	<0.00397	0.00397	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00		Jul-19-19 15:00	
	Analyzed:	Jul-20-19 00:19		Jul-20-19 00:25		Jul-20-19 00:31		Jul-20-19 00:38		Jul-20-19 00:44		Jul-20-19 01:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		67.1	4.95	32.0	5.04	16.6	4.95	191	5.01	180	5.00	<4.99	4.99
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00		Jul-20-19 11:00	
	Analyzed:	Jul-21-19 02:31		Jul-21-19 02:56		Jul-21-19 03:20		Jul-21-19 03:45		Jul-21-19 04:36		Jul-21-19 05:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		63.3	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	38.3	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		17.1	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		80.4	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	38.3	15.0	<15.0	15.0
Total GRO-DRO		63.3	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	38.3	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-001	Date Collected:	07.18.19 11.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130**	5.00	mg/kg	07.19.19 23.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.20.19 23.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**44.6**	15.0	mg/kg	07.20.19 23.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.20.19 23.23	U	1
Total TPH	PHC635	**44.6**	15.0	mg/kg	07.20.19 23.23		1
Total GRO-DRO	PHC628	**44.6**	15.0	mg/kg	07.20.19 23.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	07.20.19 23.23	
o-Terphenyl	84-15-1	102	%	70-135	07.20.19 23.23	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-001	Date Collected:	07.18.19 11.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.20.19 17.06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.20.19 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.20.19 17.06	
1,4-Difluorobenzene	540-36-3	118	%	70-130	07.20.19 17.06	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-002	Date Collected:	07.18.19 11.05	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**139**	4.97	mg/kg	07.19.19 23.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**35.3**	15.0	mg/kg	07.21.19 00.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 00.34	U	1
Total TPH	PHC635	**35.3**	15.0	mg/kg	07.21.19 00.34		1
Total GRO-DRO	PHC628	**35.3**	15.0	mg/kg	07.21.19 00.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	07.21.19 00.34	
o-Terphenyl	84-15-1	108	%	70-135	07.21.19 00.34	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-002	Date Collected:	07.18.19 11.05	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.20.19 17.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.20.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	07.20.19 17.26	
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.20.19 17.26	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-003	Date Collected:	07.18.19 11.10	Sample Depth:	4 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**154**	5.00	mg/kg	07.19.19 23.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 00.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**94.0**	15.0	mg/kg	07.21.19 00.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 00.57	U	1
Total TPH	PHC635	**94.0**	15.0	mg/kg	07.21.19 00.57		1
Total GRO-DRO	PHC628	**94.0**	15.0	mg/kg	07.21.19 00.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	07.21.19 00.57	
o-Terphenyl	84-15-1	101	%	70-135	07.21.19 00.57	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-003	Date Collected:	07.18.19 11.10	Sample Depth:	4 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.20.19 17.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.20.19 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.20.19 17.47	
1,4-Difluorobenzene	540-36-3	117	%	70-130	07.20.19 17.47	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-004	Date Collected:	07.18.19 11.15	Sample Depth:	4 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**359**	5.02	mg/kg	07.19.19 23.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 01.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	**150**	15.0	mg/kg	07.21.19 01.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 01.21	U	1
Total TPH	PHC635	**150**	15.0	mg/kg	07.21.19 01.21		1
Total GRO-DRO	PHC628	**150**	15.0	mg/kg	07.21.19 01.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.21.19 01.21	
o-Terphenyl	84-15-1	95	%	70-135	07.21.19 01.21	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-004	Date Collected:	07.18.19 11.15	Sample Depth:	4 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.20.19 18.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.20.19 18.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	07.20.19 18.07	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.20.19 18.07	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-005	Date Collected:	07.18.19 11.20	Sample Depth:	6 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**372**	4.99	mg/kg	07.19.19 23.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 01.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	**96.5**	15.0	mg/kg	07.21.19 01.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 01.44	U	1
Total TPH	PHC635	**96.5**	15.0	mg/kg	07.21.19 01.44		1
Total GRO-DRO	PHC628	**96.5**	15.0	mg/kg	07.21.19 01.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.21.19 01.44	
o-Terphenyl	84-15-1	88	%	70-135	07.21.19 01.44	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-005	Date Collected:	07.18.19 11.20	Sample Depth:	6 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.20.19 18.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.20.19 18.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.20.19 18.27	
1,4-Difluorobenzene	540-36-3	119	%	70-130	07.20.19 18.27	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-006	Date Collected:	07.18.19 11.25	Sample Depth:	4 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**152**	4.95	mg/kg	07.20.19 00.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 02.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**297**	15.0	mg/kg	07.21.19 02.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**22.4**	15.0	mg/kg	07.21.19 02.08		1
Total TPH	PHC635	**319**	15.0	mg/kg	07.21.19 02.08		1
Total GRO-DRO	PHC628	**297**	15.0	mg/kg	07.21.19 02.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	07.21.19 02.08	
o-Terphenyl	84-15-1	95	%	70-135	07.21.19 02.08	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-006	Date Collected:	07.18.19 11.25	Sample Depth:	4 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 11.25	Basis:	Wet Weight
Seq Number:	3095966			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.20.19 18.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.20.19 18.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.20.19 18.47	
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.20.19 18.47	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-007	Date Collected:	07.18.19 11.30	Sample Depth:	0.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**67.1**	4.95	mg/kg	07.20.19 00.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.3**	15.0	mg/kg	07.21.19 02.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.1**	15.0	mg/kg	07.21.19 02.31		1
Total TPH	PHC635	**80.4**	15.0	mg/kg	07.21.19 02.31		1
Total GRO-DRO	PHC628	**63.3**	15.0	mg/kg	07.21.19 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.21.19 02.31	
o-Terphenyl	84-15-1	99	%	70-135	07.21.19 02.31	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-007	Date Collected:	07.18.19 11.30	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.21.19 11.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.21.19 11.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	07.21.19 11.51	
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.21.19 11.51	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-008	Date Collected:	07.18.19 11.35	Sample Depth:	0.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.0**	5.04	mg/kg	07.20.19 00.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 02.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.21.19 02.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 02.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.21.19 02.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.21.19 02.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.21.19 02.56	
o-Terphenyl	84-15-1	86	%	70-135	07.21.19 02.56	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-008	Date Collected:	07.18.19 11.35	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.21.19 04.40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.21.19 04.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	07.21.19 04.40	
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.21.19 04.40	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-009	Date Collected:	07.18.19 11.40	Sample Depth:	0.5 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.6**	4.95	mg/kg	07.20.19 00.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 03.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.21.19 03.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 03.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.21.19 03.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.21.19 03.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	07.21.19 03.20	
o-Terphenyl	84-15-1	80	%	70-135	07.21.19 03.20	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-009	Date Collected:	07.18.19 11.40	Sample Depth:	0.5 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.21.19 12.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.21.19 12.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.21.19 12.11	
4-Bromofluorobenzene	460-00-4	92	%	70-130	07.21.19 12.11	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-010	Date Collected:	07.18.19 11.45	Sample Depth:	0.5 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**191**	5.01	mg/kg	07.20.19 00.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 03.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.21.19 03.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 03.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.21.19 03.45	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.21.19 03.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.21.19 03.45	
o-Terphenyl	84-15-1	80	%	70-135	07.21.19 03.45	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-010	Date Collected:	07.18.19 11.45	Sample Depth:	0.5 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.21.19 05.20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.21.19 05.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	07.21.19 05.20	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.21.19 05.20	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-011	Date Collected:	07.18.19 11.50	Sample Depth:	0.5 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**180**	5.00	mg/kg	07.20.19 00.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 04.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.3**	15.0	mg/kg	07.21.19 04.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 04.36	U	1
Total TPH	PHC635	**38.3**	15.0	mg/kg	07.21.19 04.36		1
Total GRO-DRO	PHC628	**38.3**	15.0	mg/kg	07.21.19 04.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.21.19 04.36	
o-Terphenyl	84-15-1	79	%	70-135	07.21.19 04.36	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-011	Date Collected:	07.18.19 11.50	Sample Depth:	0.5 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.21.19 05.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.21.19 05.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.21.19 05.40	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.21.19 05.40	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-012	Date Collected:	07.18.19 11.55	Sample Depth:	0.5 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.19.19 15.00	Basis:	Wet Weight
Seq Number:	3096017			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	07.20.19 01.03	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.20.19 11.00	Basis:	Wet Weight
Seq Number:	3096049			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.21.19 05.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.21.19 05.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.21.19 05.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.21.19 05.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	07.21.19 05.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.21.19 05.00	
o-Terphenyl	84-15-1	88	%	70-135	07.21.19 05.00	

Certificate of Analytical Results 631454

LT Environmental, Inc., Arvada, CO

PLU 144 Flowline @PLU 140

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.18.19 15.50
Lab Sample Id:	631454-012	Date Collected:	07.18.19 11.55	Sample Depth:	0.5 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.19.19 12.10	Basis:	Wet Weight
Seq Number:	3095967			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.21.19 12.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.21.19 12.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	07.21.19 12.31	
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.21.19 12.31	

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 631454

LT Environmental, Inc.

PLU 144 Flowline @PLU 140

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096017 — Matrix: Solid — Date Prep: 07.19.19
MB Sample Id: 7682394-1-BLK — LCS Sample Id: 7682394-1-BKS — LCSD Sample Id: 7682394-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	250	100	250	100	90-110	0	20	mg/kg	07.19.19 23:03	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096017 — Matrix: Soil — Date Prep: 07.19.19
Parent Sample Id: 631454-001 — MS Sample Id: 631454-001 S — MSD Sample Id: 631454-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	130	250	377	99	377	99	90-110	0	20	mg/kg	07.19.19 23:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096017 — Matrix: Soil — Date Prep: 07.19.19
Parent Sample Id: 631454-011 — MS Sample Id: 631454-011 S — MSD Sample Id: 631454-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	180	250	427	99	426	98	90-110	0	20	mg/kg	07.20.19 00:50	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3096049 — Matrix: Solid — Date Prep: 07.20.19
MB Sample Id: 7682447-1-BLK — LCS Sample Id: 7682447-1-BKS — LCSD Sample Id: 7682447-1-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	1160	116	1100	110	70-135	5	20	mg/kg	07.20.19 22:36	
Diesel Range Organics (DRO)	<15.0	1000	1150	115	1080	108	70-135	6	20	mg/kg	07.20.19 22:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		99		106		70-135	%	07.20.19 22:36
o-Terphenyl	92		95		105		70-135	%	07.20.19 22:36

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

QC Summary 631454

LT Environmental, Inc.

PLU 144 Flowline @PLU 140

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3096049 | Matrix: Soil | Date Prep: 07.20.19
Parent Sample Id: 631454-001 | MS Sample Id: 631454-001 S | MSD Sample Id: 631454-001 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)	11.1	1000	1160	115	1060	105	70-135	9	20	mg/kg	07.20.19 23:47	
Diesel Range Organics (DRO)	44.6	1000	1150	111	1100	106	70-135	4	20	mg/kg	07.20.19 23:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		90		70-135	%	07.20.19 23:47
o-Terphenyl	88		81		70-135	%	07.20.19 23:47

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3095966 | Matrix: Solid | Date Prep: 07.19.19
MB Sample Id: 7682415-1-BLK | LCS Sample Id: 7682415-1-BKS | LCSD Sample Id: 7682415-1-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	0.111	111	0.118	118	70-130	6	35	mg/kg	07.20.19 05:13	
Toluene	<0.000456	0.100	0.0908	91	0.0968	97	70-130	6	35	mg/kg	07.20.19 05:13	
Ethylbenzene	<0.000565	0.100	0.0836	84	0.0901	90	70-130	7	35	mg/kg	07.20.19 05:13	
m,p-Xylenes	<0.00101	0.200	0.166	83	0.178	89	70-130	7	35	mg/kg	07.20.19 05:13	
o-Xylene	<0.00200	0.100	0.0805	81	0.0867	87	70-130	7	35	mg/kg	07.20.19 05:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		112		112		70-130	%	07.20.19 05:13
4-Bromofluorobenzene	85		85		87		70-130	%	07.20.19 05:13

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3095967 | Matrix: Solid | Date Prep: 07.19.19
MB Sample Id: 7682417-1-BLK | LCS Sample Id: 7682417-1-BKS | LCSD Sample Id: 7682417-1-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	0.110	110	0.115	115	70-130	4	35	mg/kg	07.20.19 20:30	
Toluene	<0.000456	0.100	0.0909	91	0.0929	93	70-130	2	35	mg/kg	07.20.19 20:30	
Ethylbenzene	<0.00200	0.100	0.0834	83	0.0848	85	70-130	2	35	mg/kg	07.20.19 20:30	
m,p-Xylenes	<0.00101	0.200	0.167	84	0.168	84	70-130	1	35	mg/kg	07.20.19 20:30	
o-Xylene	<0.000344	0.100	0.0816	82	0.0830	83	70-130	2	35	mg/kg	07.20.19 20:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		113		114		70-130	%	07.20.19 20:30
4-Bromofluorobenzene	86		86		85		70-130	%	07.20.19 20:30

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 631454

LT Environmental, Inc.

PLU 144 Flowline @PLU 140

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095966 Matrix: Soil Date Prep: 07.19.19
Parent Sample Id: 631258-001 MS Sample Id: 631258-001 S MSD Sample Id: 631258-001 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	0.101	101	0.0990	98	70-130	2	35	mg/kg	07.20.19 05:53	
Toluene	<0.000457	0.100	0.0826	83	0.0824	82	70-130	0	35	mg/kg	07.20.19 05:53	
Ethylbenzene	<0.00200	0.100	0.0769	77	0.0777	77	70-130	1	35	mg/kg	07.20.19 05:53	
m,p-Xylenes	<0.00102	0.200	0.153	77	0.154	77	70-130	1	35	mg/kg	07.20.19 05:53	
o-Xylene	<0.00200	0.100	0.0747	75	0.0754	75	70-130	1	35	mg/kg	07.20.19 05:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		115		70-130	%	07.20.19 05:53
4-Bromofluorobenzene	94		93		70-130	%	07.20.19 05:53

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095967 Matrix: Soil Date Prep: 07.19.19
Parent Sample Id: 631323-001 MS Sample Id: 631323-001 S MSD Sample Id: 631323-001 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	0.0998	0.0917	92	0.0833	84	70-130	10	35	mg/kg	07.21.19 12:52	
Toluene	<0.000455	0.0998	0.0680	68	0.0567	57	70-130	18	35	mg/kg	07.21.19 12:52	X
Ethylbenzene	<0.00200	0.0998	0.0553	55	0.0417	42	70-130	28	35	mg/kg	07.21.19 12:52	X
m,p-Xylenes	<0.00399	0.200	0.107	54	0.0796	40	70-130	29	35	mg/kg	07.21.19 12:52	X
o-Xylene	<0.00200	0.0998	0.0520	52	0.0398	40	70-130	27	35	mg/kg	07.21.19 12:52	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		116		70-130	%	07.21.19 12:52
4-Bromofluorobenzene	91		90		70-130	%	07.21.19 12:52

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

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 El Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 www.xenco.com

Work Order No: 631454

Page 1 of 2

Project Manager:	DAN MOIR	Bill to: (If different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(432) 236-3849	Email:	dmoir@ltenv.com abyers@ltenv.com

Work Order Comments

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

Project Name:	PLU 144 Flowline @ PLU 140	Turn Around	
Project Number:		Routine ☐	
Project Location	Rural Eddy County	Rush: 3 day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-3067	Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	5.5	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	TM007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	10

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	FS01	S	7/18/19	1100	4'	1			
	FS02	S		1105	4'	1			
	FS03	S		1110	4-6'	1			
	FS04	S		1115	4-6'	1			
	FS05	S		1120	6-8'	1			
	FS06	S		1125	4-6'	1			
	SW01	S		1130	0.5-4'	1			
	SW02	S		1135	0.5-4'	1			
	SW03	S		1140	0.5 6'	1			
	SW04	S		1145	0.5-8'	1			

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2SO4: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Mal	07.18.19 14:50	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 El Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 631454

Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432-236-3849	Email:	dmoir@ltenv.com & abyers@ltenv.com

Work Order Comments

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

Project Name:	PLU 144 Flowline @ PLU 140	Turn Around	
Project Number:		Routine ☐	
Project Location	Rural Eddy County	Rush: 3 day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-3067	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):		Thermometer ID	TPW07
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	SW05	S	7/18/19	1150	0.5-8'	1		X	X	X
	SW06	S	7/18/19	1155	0.5-6'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		07-18-19 14:20	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number **43758**

Date/Time: 07/18/19 16:06
Created by: Martha Castro
Please send report to: Jessica Kramer

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

Lab# To: **Midland**
Air Bill No.: 7757 8077 6800
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631454-001	S	FS01	07/18/19 11:00	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-001	S	FS01	07/18/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-001	S	FS01	07/18/19 11:00	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-002	S	FS02	07/18/19 11:05	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-002	S	FS02	07/18/19 11:05	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-002	S	FS02	07/18/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-003	S	FS03	07/18/19 11:10	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-003	S	FS03	07/18/19 11:10	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-003	S	FS03	07/18/19 11:10	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-004	S	FS04	07/18/19 11:15	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-004	S	FS04	07/18/19 11:15	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-004	S	FS04	07/18/19 11:15	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-005	S	FS05	07/18/19 11:20	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-005	S	FS05	07/18/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-005	S	FS05	07/18/19 11:20	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-006	S	FS06	07/18/19 11:25	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-006	S	FS06	07/18/19 11:25	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-006	S	FS06	07/18/19 11:25	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-007	S	SW01	07/18/19 11:30	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-007	S	SW01	07/18/19 11:30	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-007	S	SW01	07/18/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-008	S	SW02	07/18/19 11:35	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-008	S	SW02	07/18/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-008	S	SW02	07/18/19 11:35	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-009	S	SW03	07/18/19 11:40	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	

Inter-Office Shipment

IOS Number **43758**

Date/Time: 07/18/19 16:06
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Martha Castro
Delivery Priority:
Air Bill No.: 7757 8077 6800

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631454-009	S	SW03	07/18/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-009	S	SW03	07/18/19 11:40	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-010	S	SW04	07/18/19 11:45	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-010	S	SW04	07/18/19 11:45	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-010	S	SW04	07/18/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-011	S	SW05	07/18/19 11:50	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-011	S	SW05	07/18/19 11:50	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	
631454-011	S	SW05	07/18/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-012	S	SW06	07/18/19 11:55	SW8015MOD_NM	TPH by SW8015 Mod	07/22/19	08/01/19	JKR	GRO-DRO PHCC10C28 PI	
631454-012	S	SW06	07/18/19 11:55	SW8021B	BTEX by EPA 8021B	07/22/19	08/01/19	JKR	BR4FBZ BZ BZME EBZ X	
631454-012	S	SW06	07/18/19 11:55	E300_CL	Chloride by EPA 300	07/22/19	01/14/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Martha Castro
Date Relinquished: 07/18/2019

Received By: Katie Lowe
Date Received: 07/19/2019 11:45
Cooler Temperature: 4.2

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 43758

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

Sent By: Martha Castro **Date Sent:** 07/18/2019 04:06 PM

Received By: Katie Lowe **Date Received:** 07/19/2019 11:45 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Katie Lowe Date: 07/19/2019

Katie Lowe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/18/2019 03:50:00 PM

Work Order #: 631454

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

Temperature Measuring device used : T NM 007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**No**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland
#18 Water VOC samples have zero headspace?	**Yes**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Martha Castro Date: 07/18/2019

Checklist reviewed by: Jessica Kramer Date: 07/22/2019

Jessica Kramer

Analytical Report 632218

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 144

2RP-3067

06-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

06-AUG-19

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

Reference: XENCO Report No(s): **632218**
PLU 144
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 632218. 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. 632218 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 632218

LT Environmental, Inc., Arvada, CO

PLU 144

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04A	S	07-25-19 13:25	8 ft	632218-001
FS06A	S	07-25-19 13:00	7 ft	632218-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 144

Project ID: *2RP-3067*
Work Order Number(s): *632218*

Report Date: *06-AUG-19*
Date Received: *07/26/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3097550 BTEX by EPA 8021B

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

Certificate of Analysis Summary 632218

LT Environmental, Inc., Arvada, CO

Project Name: PLU 144

Project Id: 2RP-3067
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Jul-26-19 01:55 pm
Report Date: 06-AUG-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	632218-001		632218-002					
	Field Id:	FS04A		FS06A					
	Depth:	8- ft		7- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-25-19 13:25		Jul-25-19 13:00					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-31-19 10:05		Jul-31-19 10:05					
	Analyzed:	Aug-01-19 08:48		Aug-01-19 09:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00201	0.00201				
Toluene		<0.00198	0.00198	<0.00201	0.00201				
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201				
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402				
o-Xylene		0.00755	0.00198	0.00285	0.00201				
Total Xylenes		0.00755	0.00198	0.00285	0.00201				
Total BTEX		0.00755	0.00198	0.00285	0.00201				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jul-29-19 19:00		Jul-29-19 19:00					
	Analyzed:	Jul-30-19 03:58		Jul-30-19 04:03					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		10.1	5.02	38.4	5.01				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-02-19 10:00		Aug-02-19 10:00					
	Analyzed:	Aug-04-19 19:42		Aug-04-19 20:06					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 632218

LT Environmental, Inc., Arvada, CO

PLU 144

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	07.26.19 13.55
Lab Sample Id:	632218-001	Date Collected:	07.25.19 13.25	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.19 19.00	Basis:	Wet Weight
Seq Number:	3096872			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.1**	5.02	mg/kg	07.30.19 03.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.19 10.00	Basis:	Wet Weight
Seq Number:	3097491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 19.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 19.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 19.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 19.42	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.04.19 19.42	
o-Terphenyl	84-15-1	71	%	70-135	08.04.19 19.42	

Certificate of Analytical Results 632218

LT Environmental, Inc., Arvada, CO

PLU 144

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	07.26.19 13.55
Lab Sample Id:	632218-001	Date Collected:	07.25.19 13.25	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	07.31.19 10.05	Basis:	Wet Weight
Seq Number:	3097550			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.01.19 08.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.01.19 08.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.01.19 08.48	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.01.19 08.48	U	1
o-Xylene	95-47-6	**0.00755**	0.00198	mg/kg	08.01.19 08.48		1
Total Xylenes	1330-20-7	**0.00755**	0.00198	mg/kg	08.01.19 08.48		1
Total BTEX		**0.00755**	0.00198	mg/kg	08.01.19 08.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.01.19 08.48	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.19 08.48	

Certificate of Analytical Results 632218

LT Environmental, Inc., Arvada, CO

PLU 144

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	07.26.19 13.55
Lab Sample Id:	632218-002	Date Collected:	07.25.19 13.00	Sample Depth:	7 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.19 19.00	Basis:	Wet Weight
Seq Number:	3096872			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.4**	5.01	mg/kg	07.30.19 04.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.19 10.00	Basis:	Wet Weight
Seq Number:	3097491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.19 20.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.19 20.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.04.19 20.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.19 20.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.04.19 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.04.19 20.06	
o-Terphenyl	84-15-1	84	%	70-135	08.04.19 20.06	

Certificate of Analytical Results 632218

LT Environmental, Inc., Arvada, CO

PLU 144

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	07.26.19 13.55
Lab Sample Id:	632218-002	Date Collected:	07.25.19 13.00	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	07.31.19 10.05	Basis:	Wet Weight
Seq Number:	3097550			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.01.19 09.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.01.19 09.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.01.19 09.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.01.19 09.08	U	1
o-Xylene	95-47-6	**0.00285**	0.00201	mg/kg	08.01.19 09.08		1
Total Xylenes	1330-20-7	**0.00285**	0.00201	mg/kg	08.01.19 09.08		1
Total BTEX		**0.00285**	0.00201	mg/kg	08.01.19 09.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.01.19 09.08	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.01.19 09.08	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 632218

LT Environmental, Inc.

PLU 144

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096872 — Matrix: Solid — Date Prep: 07.29.19
MB Sample Id: 7683098-1-BLK — LCS Sample Id: 7683098-1-BKS — LCSD Sample Id: 7683098-1-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	265	106	265	106	90-110	0	20	mg/kg	07.30.19 01:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096872 — Matrix: Soil — Date Prep: 07.29.19
Parent Sample Id: 632259-024 — MS Sample Id: 632259-024 S — MSD Sample Id: 632259-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.98	251	284	110	285	110	90-110	0	20	mg/kg	07.30.19 01:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096872 — Matrix: Soil — Date Prep: 07.29.19
Parent Sample Id: 632259-025 — MS Sample Id: 632259-025 S — MSD Sample Id: 632259-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.29	251	279	110	275	108	90-110	1	20	mg/kg	07.30.19 02:58	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3097491 — Matrix: Solid — Date Prep: 08.02.19
MB Sample Id: 7683385-1-BLK — LCS Sample Id: 7683385-1-BKS — LCSD Sample Id: 7683385-1-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	965	97	1060	106	70-135	9	20	mg/kg	08.04.19 10:45	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1110	111	70-135	2	20	mg/kg	08.04.19 10:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		85		97		70-135	%	08.04.19 10:45
o-Terphenyl	81		109		107		70-135	%	08.04.19 10:45

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

QC Summary 632218

LT Environmental, Inc.

PLU 144

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3097491 — Matrix: Soil — Date Prep: 08.02.19
Parent Sample Id: 632221-001 — MS Sample Id: 632221-001 S — MSD Sample Id: 632221-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	911	91	954	96	70-135	5	20	mg/kg	08.04.19 11:54	
Diesel Range Organics (DRO)	<8.12	999	993	99	1010	101	70-135	2	20	mg/kg	08.04.19 11:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		93		70-135	%	08.04.19 11:54
o-Terphenyl	110		110		70-135	%	08.04.19 11:54

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3097550 — Matrix: Solid — Date Prep: 07.31.19
MB Sample Id: 7683178-1-BLK — LCS Sample Id: 7683178-1-BKS — LCSD Sample Id: 7683178-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0927	93	0.0869	87	70-130	6	35	mg/kg	08.01.19 05:28	
Toluene	0.000470	0.100	0.0899	90	0.0863	86	70-130	4	35	mg/kg	08.01.19 05:28	
Ethylbenzene	<0.00200	0.100	0.0914	91	0.0883	88	70-130	3	35	mg/kg	08.01.19 05:28	
m,p-Xylenes	<0.00101	0.200	0.184	92	0.180	90	70-130	2	35	mg/kg	08.01.19 05:28	
o-Xylene	<0.000344	0.100	0.0965	97	0.0964	96	70-130	0	35	mg/kg	08.01.19 05:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		98		101		70-130	%	08.01.19 05:28
4-Bromofluorobenzene	115		108		120		70-130	%	08.01.19 05:28

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3097550 — Matrix: Soil — Date Prep: 07.31.19
Parent Sample Id: 632058-053 — MS Sample Id: 632058-053 S — MSD Sample Id: 632058-053 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	0.0831	83	0.0646	65	70-130	25	35	mg/kg	08.01.19 06:08	X
Toluene	<0.000457	0.100	0.0811	81	0.0643	64	70-130	23	35	mg/kg	08.01.19 06:08	X
Ethylbenzene	<0.00200	0.100	0.0831	83	0.0658	66	70-130	23	35	mg/kg	08.01.19 06:08	X
m,p-Xylenes	<0.00102	0.200	0.167	84	0.134	67	70-130	22	35	mg/kg	08.01.19 06:08	X
o-Xylene	<0.00200	0.100	0.0874	87	0.0713	71	70-130	20	35	mg/kg	08.01.19 06:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		70-130	%	08.01.19 06:08
4-Bromofluorobenzene	123		115		70-130	%	08.01.19 06:08

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

Chain of Custody

Work Order No: 032218

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

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:		slo@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 144	Turn Around	
Project Number:	ZRP-3067	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.8	Thermometer ID	
Received Intact:	(Yes) No	T-MM-07	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS04A	S	7.25.19	1325	8'	1	X	X	X
FS06A	S	7.25.19	1300	7'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			07/26/2019 13:00	2		07/26/19 13:55
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **45070**

Date/Time: 07/26/19 15:06
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775849111879

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632218-001	S	FS04A	07/25/19 13:25	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/08/19	JKR	GRO-DRO PHCC10C28 PI	
632218-001	S	FS04A	07/25/19 13:25	SW8021B	BTEX by EPA 8021B	08/01/19	08/08/19	JKR	BR4FBZ BZ BZME EBZ X	
632218-001	S	FS04A	07/25/19 13:25	E300_CL	Chloride by EPA 300	08/01/19	01/21/20	JKR	CL	
632218-002	S	FS06A	07/25/19 13:00	SW8021B	BTEX by EPA 8021B	08/01/19	08/08/19	JKR	BR4FBZ BZ BZME EBZ X	
632218-002	S	FS06A	07/25/19 13:00	E300_CL	Chloride by EPA 300	08/01/19	01/21/20	JKR	CL	
632218-002	S	FS06A	07/25/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	08/01/19	08/08/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 07/26/2019

Received By: Brianna Teel

Date Received: 07/29/2019 07:56

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 45070

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

Sent By: Elizabeth McClellan **Date Sent:** 07/26/2019 03:06 PM

Received By: Brianna Teel **Date Received:** 07/29/2019 07:56 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 07/29/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/26/2019 01:55:00 PM

Work Order #: 632218

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

Temperature Measuring device used : T-NM-07

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**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)?	**Yes**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 07/26/2019

Checklist reviewed by: Jessica Kramer Date: 07/30/2019

Jessica Kramer

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

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

CONDITIONS

Action 188558

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 188558
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	2/21/2023