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	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.456875 Longitude -104.054989
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit 70	Site Type Well Location
Date Release Discovered 11/16/2019	API# *(if applicable)* 30-015-23473

Unit Letter	Section	Township	Range	County
B	26	21S	28E	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 40.0	Volume Recovered (bbls) 40.0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: A manway cover leaked between the flange and gasket releasing 40 bbls of produced water into a lined containment. A vacuum truck was dispatched and recovered 40 bbls. A 48-hour advance notice of liner inspection was provided by email to NMOCD District 2. The liner was visually inspected and determined to have one small hole on the east side. A third party contractor will be retained to delineate for deferral.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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? YES – An unauthorized release of fluid over 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

YES by Amy Ruth : to Mike Bratcher; Robert Hamlet; Victoria Venegas; Jim Griswold; camorgan@blm.gov; blm_nm_cfo_spill by email on November 17, 2019 12:00 PM

Initial Response

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

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

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

N/A

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 11/26/2019

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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	
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: 12/27/2019

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

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 12/27/2019

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

December 27, 2019

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Deferral Request
Big Eddy Unit 70
Remediation Permit Number Not Assigned
PO#: CEK6I-191126-C-1410
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Big Eddy Unit 70 (Site) in Unit B, Section 26, Township 21 South, Range 28 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impacts to soil following a release of produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation for this release event.

RELEASE BACKGROUND

On November 16, 2019, a leak on a manway cover on a produced water tank resulted in the release of 40 barrels (bbls) of produced water into the lined tank battery containment. The pump was isolated until repairs could be made. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 40 bbls of produced water were recovered. A liner integrity inspection was conducted. A 48-hour notification was provided to the New Mexico Oil Conservation Division (NMOCD) via email prior to the liner inspection. The liner was visibly inspected and the inspector determined the liner had a hole. XTO reported the release to the NMOCD on a Form C-141 on November 26, 2019, and the RP Number has not been assigned.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater

well with depth to groundwater data is United States Geological Survey (USGS) Well 322632104023001, located approximately 1.25 miles southeast of the Site. The groundwater well has a depth to groundwater of approximately 161 feet bgs and a total depth of approximately 241 feet bgs. The closest continuously-flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 1,198 feet southeast 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 medium 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On December 11, 2019 through December 20, 2019, LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the southeastern edge of the caliche well pad. Site assessment activities and vertical delineation soil sampling was completed at the location of the hole found during the liner integrity inspection conducted by XTO. Nine soil samples were collected at depths ranging from 1 foot and 11 feet bgs (BH01 through BH01H). Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 1. The borehole was backfilled with the soil removed and XTO repaired the liner. The borehole and vertical delineation soil sample location is depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to

Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 through BH01F, collected at depths ranging from one foot to eight feet bgs, indicated that TPH-GRO, TPH-DRO, and/or TPH concentrations exceeded the Closure Criteria. Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples BH01G and BH01H at depths of approximately 10 feet and 11 feet bgs, respectively. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

DEFERRAL REQUEST

Following the failed liner integrity inspection, LTE personnel advanced one borehole in the location of the hole in the compromised liner. Delineation soil samples BH01 through BH01H were collected from within the lined tank battery containment from depths ranging from one foot to 11 feet bgs to assess for the presence or absence of soil impacts as a result of the November 16, 2019, produced water release. Laboratory analytical results indicated that TPH-GRO, TPH-DRO, and/or TPH concentrations exceeded the Closure Criteria in soil samples BH01 through BH01F, collected at depths ranging from one foot to eight feet bgs. Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples BH01G and BH01H at depths of approximately 10 feet and 11 feet bgs, respectively.

Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined containment in which active operating equipment exists. Vertical delineation was achieved at approximately 10 feet bgs. The lateral extent of impacted soil remaining in place is defined by the lined tank battery containment. An estimated 450 cubic yards of impacted soil remains in place surrounding borehole BH01 and beneath the lined tank battery containment, assuming a maximum 10-foot depth based on soil sample BH01G collected at a depth of 10 feet bgs that was compliant with the Closure Criteria.

Based on the site characterization indicating depth to groundwater is greater than 100 feet bgs and no nearby surface features, LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The lined containment was repaired by XTO and will restrict potential vertical migration of residual impacts. XTO requests deferral of

final remediation for this release event unitl final reclamation of the well pad or major construction, whichever comes first. An updated Form C-141 is attached to this Closure Request.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

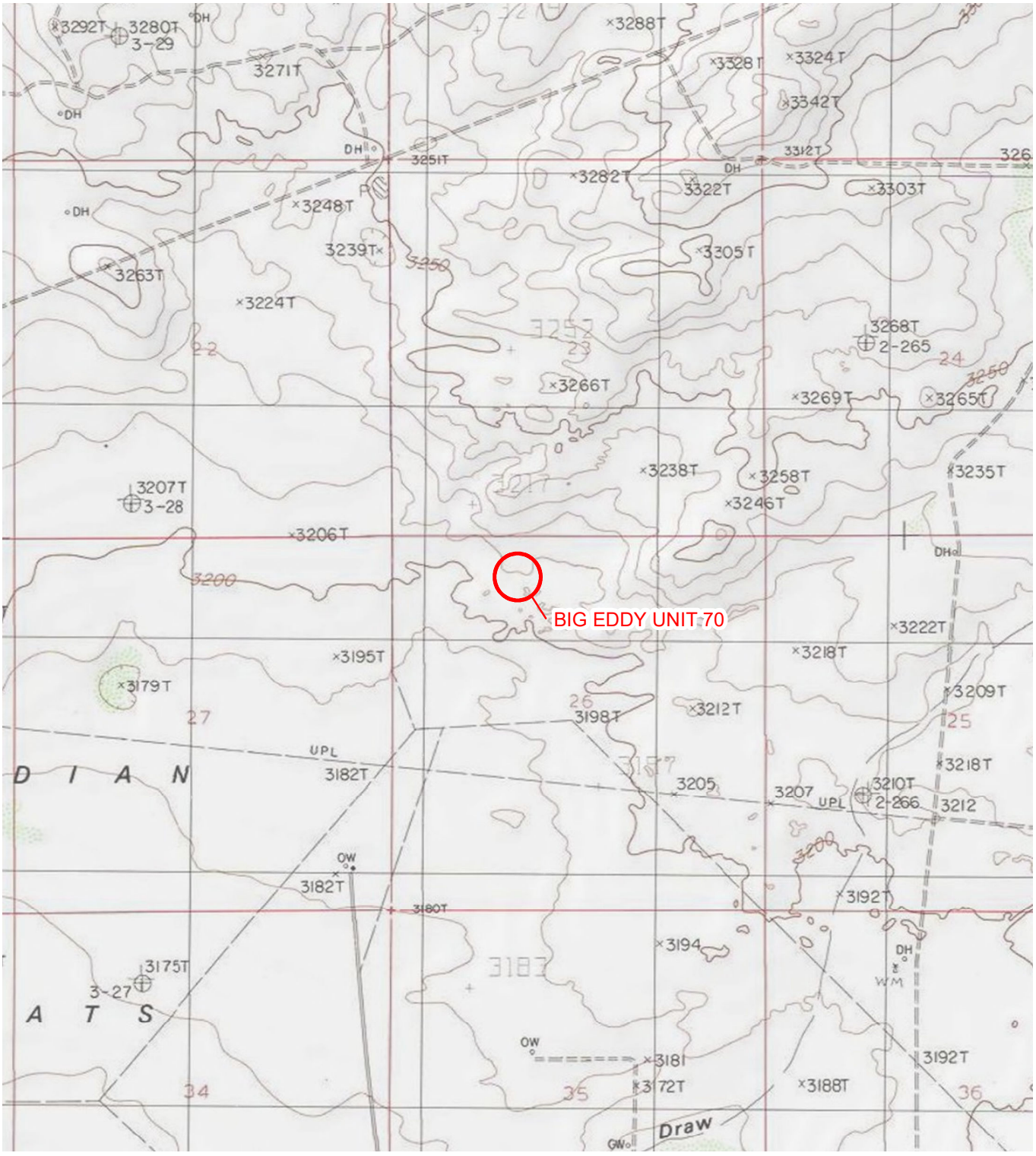
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
United States Bureau of Land Management – New Mexico
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Lithologic/Soil Sampling Logs
Attachment 2	Photographic Log
Attachment 3	Laboratory Analytical Reports

FIGURES



LEGEND

IMAGE COURTESY OF ESRI/USGS

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT 70
UNIT B SEC 26 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919286_BIG EDDY UNIT 70\012919286_FIG01_SL_2019.mxd

LEGEND

IMAGE COURTESY OF ESRI

DELINEATION 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 NOT ASSIGNED

0 50 100
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 70
UNIT B SEC 26 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919286_BIG EDDY UNIT 70\012919286_FIG02_DELINEATION_2019.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 70
REMEDIATION PERMIT NUMBER NOT ASSIGNED
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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
BH01	1	12/11/2019	<0.00400	<0.00400	0.0328	0.412	0.445	287	3,620	291	**3,910**	**4,200**	1,670
BH01A	1.5	12/11/2019	<0.00200	0.00342	0.0117	0.0672	0.0823	79.5	1,770	165	**1,850**	2,010	830
BH01B	2	12/11/2019	<0.00200	<0.00200	0.0179	0.0867	0.105	98.4	2,420	211	**2,520**	**2,730**	466
BH01C	2.5	12/11/2019	<0.0179	<0.0179	0.0818	0.433	0.515	50.5	1,380	139	**1,430**	1,570	556
BH01D	3	12/11/2019	<0.0175	<0.0175	0.228	1.2	1.43	98.1	2,330	197	**2,430**	**2,630**	470
BH01E	4	12/11/2019	<0.0312	<0.0312	0.169	0.772	0.941	113	2,410	171	**2,520**	**2,690**	426
BH01F	8	12/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	1,460	113	**1,460**	1,570	231
BH01G	10	12/20/2019	<0.00200	<0.00200	0.00225	0.0193	0.0215	<50.3	778	63.3	778	841	397
BH01H	11	12/20/2019	<0.00198	<0.00198	0.00795	0.0779	0.0859	<50.3	997	74.1	997	1,070	186

Notes:

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

ATTACHMENT 1: LITHOLOGIC/SOIL SAMPLING LOGS

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

Identifier:	Date:
BH01	12/11, 12/19, 12/20/2019
BEU 70	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB | Method: Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.456875, -103.054989	Chloride, TPH	4"	11'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
moist	1439.2	349.7		BH01	1	1'	SM	SILTY SAND, moist, light brown, poorly graded w/ cobbles, strong odor
moist	1,002.4	270.9		BH01A		1.5'	SM	SILTY SAND, moist, brown, poorly graded, stong odor
moist	392.0	300.1		BH01B	2	2'	SM	SILTY SAND, moist, brown, poorly graded, strong odor
moist	571.2	258.4		BH01C		2.5'	SM	SILTY SAND, moist, brown, poorly graded, strong odor
moist	509.6	177.6		BH01D	3	3'	SM	SILTY SAND, moist, brown, poorly graded, strong odor
moist	392.0	179.0		BH01E	4	4'	SM	SILTY SAND, moist, brown, poorly graded, strong odor
					5			
					6			
					7			
dry	275	38.6		BH01F	8	8'	SM	SAND, trace silt/clay, moist, brown
					9			
dry		54.3		BH01G	10	10'	SM	Fine grained sand with clay, clay non-cohesive, moist, red-brown, poorly sorted, low plasticity
dry		116		BH01H	11	11'	SM	Fine grained sand with clay and trace caliche, clay non-cohesive, moist, red-brown, poorly sorted, low plasticity.
								Total Depth 11 feet bgs

ATTACHMENT 2: PHOTOGRAPHIC LOG

Southwestern view of release area during site assessment activities.

Project: 012919286	XTO Energy, Inc. Big Eddy Unit 70	LTE Advancing Opportunity
December 11, 2019	Photographic Log	

Northern view of release area during site assessment activities.

Project: 012919286	XTO Energy, Inc. Big Eddy Unit 70	LTE Advancing Opportunity
December 19, 2019	Photographic Log	

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 646036

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 70

012919286

13-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

13-DEC-19

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

Reference: XENCO Report No(s): **646036**
BEU 70
Project Address: 32.456875-104.054989

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) 646036. 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. 646036 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 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	12-11-19 15:02	1 ft	646036-001
BH01A	S	12-11-19 15:15	1.5 ft	646036-002
BH01B	S	12-11-19 15:25	2.0 ft	646036-003
BH01C	S	12-11-19 15:33	2.5 ft	646036-004
BH01D	S	12-11-19 15:40	3.0 ft	646036-005
BH01E	S	12-11-19 15:45	4.0 ft	646036-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: BEU 70

Project ID: *012919286*
Work Order Number(s): *646036*

Report Date: *13-DEC-19*
Date Received: *12/12/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3110350 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 646036

LT Environmental, Inc., Arvada, CO

Project Name: BEU 70

Project Id: 012919286
Contact: Dan Moir
Project Location: 32.456875-104.054989

Date Received in Lab: Thu Dec-12-19 08:20 am
Report Date: 13-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646036-001		646036-002		646036-003		646036-004		646036-005		646036-006	
	Field Id:	BH01		BH01A		BH01B		BH01C		BH01D		BH01E	
	Depth:	1- ft		1.5- ft		2.0- ft		2.5- ft		3.0- ft		4.0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-11-19 15:02		Dec-11-19 15:15		Dec-11-19 15:25		Dec-11-19 15:33		Dec-11-19 15:40		Dec-11-19 15:45	
BTEX by EPA 8021B	***Extracted:***	Dec-12-19 10:00		Dec-12-19 10:00		Dec-12-19 10:00		Dec-12-19 10:00		Dec-12-19 10:00		Dec-12-19 10:00	
	Analyzed:	Dec-12-19 15:17		Dec-12-19 15:34		Dec-12-19 15:52		Dec-12-19 14:59		Dec-12-19 14:42		Dec-12-19 14:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00400	0.00400	<0.00200	0.00200	<0.00200	0.00200	<0.0179	0.0179	<0.0175	0.0175	<0.0312	0.0312
Toluene		<0.00400	0.00400	0.00342	0.00200	<0.00200	0.00200	<0.0179	0.0179	<0.0175	0.0175	<0.0312	0.0312
Ethylbenzene		0.0328	0.00400	0.0117	0.00200	0.0179	0.00200	0.0818	0.0179	0.228	0.0175	0.169	0.0312
m,p-Xylenes		0.303	0.00800	0.0514	0.00400	0.0676	0.00400	0.322	0.0359	0.965	0.0351	0.612	0.0624
o-Xylene		0.109	0.00400	0.0158	0.00200	0.0191	0.00200	0.111	0.0179	0.234	0.0175	0.160	0.0312
Total Xylenes		0.412	0.00400	0.0672	0.00200	0.0867	0.00200	0.433	0.0179	1.20	0.0175	0.772	0.0312
Total BTEX		0.445	0.00400	0.0823	0.00200	0.105	0.00200	0.515	0.0179	1.43	0.0175	0.941	0.0312
Chloride by EPA 300	***Extracted:***	Dec-12-19 08:40		Dec-12-19 08:40		Dec-12-19 08:40		Dec-12-19 08:40		Dec-12-19 08:40		Dec-12-19 08:40	
	Analyzed:	Dec-12-19 11:22		Dec-12-19 11:27		Dec-12-19 11:33		Dec-12-19 11:39		Dec-12-19 11:45		Dec-12-19 11:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1670	9.80	830	9.94	466	9.98	556	9.92	470	9.90	426	9.98
TPH by SW8015 Mod	***Extracted:***	Dec-12-19 11:30		Dec-12-19 11:30		Dec-12-19 11:30		Dec-12-19 11:30		Dec-12-19 11:30		Dec-12-19 11:30	
	Analyzed:	Dec-12-19 14:46		Dec-12-19 15:05		Dec-12-19 15:05		Dec-12-19 15:25		Dec-12-19 15:25		Dec-13-19 09:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		287	49.9	79.5	49.9	98.4	50.0	50.5	50.1	98.1	49.9	113	50.2
Diesel Range Organics (DRO)		3620	49.9	1770	49.9	2420	50.0	1380	50.1	2330	49.9	2410	50.2
Motor Oil Range Hydrocarbons (MRO)		291	49.9	165	49.9	211	50.0	139	50.1	197	49.9	171	50.2
Total GRO-DRO		3910	49.9	1850	49.9	2520	50.0	1430	50.1	2430	49.9	2520	50.2
Total TPH		4200	49.9	2010	49.9	2730	50.0	1570	50.1	2630	49.9	2690	50.2

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Jessica Kramer
Project Assistant

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-001	Date Collected:	12.11.19 15.02	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1670**	9.80	mg/kg	12.12.19 11.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**287**	49.9	mg/kg	12.12.19 14.46		1
Diesel Range Organics (DRO)	C10C28DRO	**3620**	49.9	mg/kg	12.12.19 14.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**291**	49.9	mg/kg	12.12.19 14.46		1
Total GRO-DRO	PHC628	**3910**	49.9	mg/kg	12.12.19 14.46		1
Total TPH	PHC635	**4200**	49.9	mg/kg	12.12.19 14.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.12.19 14.46	
o-Terphenyl	84-15-1	115	%	70-135	12.12.19 14.46	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-001	Date Collected:	12.11.19 15.02	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00400	0.00400	mg/kg	12.12.19 15.17	U	1
Toluene	108-88-3	<0.00400	0.00400	mg/kg	12.12.19 15.17	U	1
Ethylbenzene	100-41-4	**0.0328**	0.00400	mg/kg	12.12.19 15.17		1
m,p-Xylenes	179601-23-1	**0.303**	0.00800	mg/kg	12.12.19 15.17		1
o-Xylene	95-47-6	**0.109**	0.00400	mg/kg	12.12.19 15.17		1
Total Xylenes	1330-20-7	**0.412**	0.00400	mg/kg	12.12.19 15.17		1
Total BTEX		**0.445**	0.00400	mg/kg	12.12.19 15.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.12.19 15.17	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.19 15.17	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-002	Date Collected:	12.11.19 15.15	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**830**	9.94	mg/kg	12.12.19 11.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**79.5**	49.9	mg/kg	12.12.19 15.05		1
Diesel Range Organics (DRO)	C10C28DRO	**1770**	49.9	mg/kg	12.12.19 15.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**165**	49.9	mg/kg	12.12.19 15.05		1
Total GRO-DRO	PHC628	**1850**	49.9	mg/kg	12.12.19 15.05		1
Total TPH	PHC635	**2010**	49.9	mg/kg	12.12.19 15.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.12.19 15.05	
o-Terphenyl	84-15-1	114	%	70-135	12.12.19 15.05	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-002	Date Collected:	12.11.19 15.15	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 15.34	U	1
Toluene	108-88-3	**0.00342**	0.00200	mg/kg	12.12.19 15.34		1
Ethylbenzene	100-41-4	**0.0117**	0.00200	mg/kg	12.12.19 15.34		1
m,p-Xylenes	179601-23-1	**0.0514**	0.00400	mg/kg	12.12.19 15.34		1
o-Xylene	95-47-6	**0.0158**	0.00200	mg/kg	12.12.19 15.34		1
Total Xylenes	1330-20-7	**0.0672**	0.00200	mg/kg	12.12.19 15.34		1
Total BTEX		**0.0823**	0.00200	mg/kg	12.12.19 15.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.12.19 15.34	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.12.19 15.34	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-003	Date Collected:	12.11.19 15.25	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**466**	9.98	mg/kg	12.12.19 11.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**98.4**	50.0	mg/kg	12.12.19 15.05		1
Diesel Range Organics (DRO)	C10C28DRO	**2420**	50.0	mg/kg	12.12.19 15.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**211**	50.0	mg/kg	12.12.19 15.05		1
Total GRO-DRO	PHC628	**2520**	50.0	mg/kg	12.12.19 15.05		1
Total TPH	PHC635	**2730**	50.0	mg/kg	12.12.19 15.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.12.19 15.05	
o-Terphenyl	84-15-1	111	%	70-135	12.12.19 15.05	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-003	Date Collected:	12.11.19 15.25	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 15.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.19 15.52	U	1
Ethylbenzene	100-41-4	**0.0179**	0.00200	mg/kg	12.12.19 15.52		1
m,p-Xylenes	179601-23-1	**0.0676**	0.00400	mg/kg	12.12.19 15.52		1
o-Xylene	95-47-6	**0.0191**	0.00200	mg/kg	12.12.19 15.52		1
Total Xylenes	1330-20-7	**0.0867**	0.00200	mg/kg	12.12.19 15.52		1
Total BTEX		**0.105**	0.00200	mg/kg	12.12.19 15.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	12.12.19 15.52	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.12.19 15.52	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-004	Date Collected:	12.11.19 15.33	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**556**	9.92	mg/kg	12.12.19 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**50.5**	50.1	mg/kg	12.12.19 15.25		1
Diesel Range Organics (DRO)	C10C28DRO	**1380**	50.1	mg/kg	12.12.19 15.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**139**	50.1	mg/kg	12.12.19 15.25		1
Total GRO-DRO	PHC628	**1430**	50.1	mg/kg	12.12.19 15.25		1
Total TPH	PHC635	**1570**	50.1	mg/kg	12.12.19 15.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	12.12.19 15.25	
o-Terphenyl	84-15-1	115	%	70-135	12.12.19 15.25	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-004	Date Collected:	12.11.19 15.33	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0179	0.0179	mg/kg	12.12.19 14.59	U	1
Toluene	108-88-3	<0.0179	0.0179	mg/kg	12.12.19 14.59	U	1
Ethylbenzene	100-41-4	**0.0818**	0.0179	mg/kg	12.12.19 14.59		1
m,p-Xylenes	179601-23-1	**0.322**	0.0359	mg/kg	12.12.19 14.59		1
o-Xylene	95-47-6	**0.111**	0.0179	mg/kg	12.12.19 14.59		1
Total Xylenes	1330-20-7	**0.433**	0.0179	mg/kg	12.12.19 14.59		1
Total BTEX		**0.515**	0.0179	mg/kg	12.12.19 14.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.12.19 14.59	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.12.19 14.59	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01D**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-005	Date Collected:	12.11.19 15.40	Sample Depth:	3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**470**	9.90	mg/kg	12.12.19 11.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**98.1**	49.9	mg/kg	12.12.19 15.25		1
Diesel Range Organics (DRO)	C10C28DRO	**2330**	49.9	mg/kg	12.12.19 15.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**197**	49.9	mg/kg	12.12.19 15.25		1
Total GRO-DRO	PHC628	**2430**	49.9	mg/kg	12.12.19 15.25		1
Total TPH	PHC635	**2630**	49.9	mg/kg	12.12.19 15.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.12.19 15.25	
o-Terphenyl	84-15-1	113	%	70-135	12.12.19 15.25	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01D**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-005	Date Collected:	12.11.19 15.40	Sample Depth:	3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0175	0.0175	mg/kg	12.12.19 14.42	U	1
Toluene	108-88-3	<0.0175	0.0175	mg/kg	12.12.19 14.42	U	1
Ethylbenzene	100-41-4	**0.228**	0.0175	mg/kg	12.12.19 14.42		1
m,p-Xylenes	179601-23-1	**0.965**	0.0351	mg/kg	12.12.19 14.42		1
o-Xylene	95-47-6	**0.234**	0.0175	mg/kg	12.12.19 14.42		1
Total Xylenes	1330-20-7	**1.20**	0.0175	mg/kg	12.12.19 14.42		1
Total BTEX		**1.43**	0.0175	mg/kg	12.12.19 14.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	12.12.19 14.42	
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.12.19 14.42	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01E**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-006	Date Collected:	12.11.19 15.45	Sample Depth:	4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 08.40	Basis:	Wet Weight
Seq Number:	3110256				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**426**	9.98	mg/kg	12.12.19 11.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.12.19 11.30	Basis:	Wet Weight
Seq Number:	3110368				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**113**	50.2	mg/kg	12.13.19 09.28		1
Diesel Range Organics (DRO)	C10C28DRO	**2410**	50.2	mg/kg	12.13.19 09.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**171**	50.2	mg/kg	12.13.19 09.28		1
Total GRO-DRO	PHC628	**2520**	50.2	mg/kg	12.13.19 09.28		1
Total TPH	PHC635	**2690**	50.2	mg/kg	12.13.19 09.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.13.19 09.28	
o-Terphenyl	84-15-1	119	%	70-135	12.13.19 09.28	

Certificate of Analytical Results 646036

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01E**	Matrix:	Soil	Date Received:	12.12.19 08.20
Lab Sample Id:	646036-006	Date Collected:	12.11.19 15.45	Sample Depth:	4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.12.19 10.00	Basis:	Wet Weight
Seq Number:	3110350				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0312	0.0312	mg/kg	12.12.19 14.25	U	1
Toluene	108-88-3	<0.0312	0.0312	mg/kg	12.12.19 14.25	U	1
Ethylbenzene	100-41-4	**0.169**	0.0312	mg/kg	12.12.19 14.25		1
m,p-Xylenes	179601-23-1	**0.612**	0.0624	mg/kg	12.12.19 14.25		1
o-Xylene	95-47-6	**0.160**	0.0312	mg/kg	12.12.19 14.25		1
Total Xylenes	1330-20-7	**0.772**	0.0312	mg/kg	12.12.19 14.25		1
Total BTEX		**0.941**	0.0312	mg/kg	12.12.19 14.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.12.19 14.25	
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.12.19 14.25	

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 646036

LT Environmental, Inc.

BEU 70

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110256 — Matrix: Solid — Date Prep: 12.12.19
MB Sample Id: 7692243-1-BLK — LCS Sample Id: 7692243-1-BKS — LCSD Sample Id: 7692243-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	265	106	90-110	2	20	mg/kg	12.12.19 09:09	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110256 — Matrix: Soil — Date Prep: 12.12.19
Parent Sample Id: 645892-006 — MS Sample Id: 645892-006 S — MSD Sample Id: 645892-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.14	4000	4290	107	4130	107	90-110	4	20	mg/kg	12.12.19 10:07	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110256 — Matrix: Soil — Date Prep: 12.12.19
Parent Sample Id: 645892-011 — MS Sample Id: 645892-011 S — MSD Sample Id: 645892-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.60	198	211	103	211	103	90-110	0	20	mg/kg	12.12.19 10:59	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110368 — Matrix: Solid — Date Prep: 12.12.19
MB Sample Id: 7692325-1-BLK — LCS Sample Id: 7692325-1-BKS — LCSD Sample Id: 7692325-1-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)	<50.0	1000	1040	104	981	98	70-135	6	35	mg/kg	12.12.19 12:22	
Diesel Range Organics (DRO)	<50.0	1000	864	86	1040	104	70-135	18	35	mg/kg	12.12.19 12:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		105		119		70-135	%	12.12.19 12:22
o-Terphenyl	107		99		119		70-135	%	12.12.19 12:22

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110368 — Matrix: Solid — Date Prep: 12.12.19
MB Sample Id: 7692325-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.12.19 12:02	

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

QC Summary 646036

LT Environmental, Inc.

BEU 70

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3110368 | Matrix: Soil | Date Prep: 12.12.19
Parent Sample Id: 646008-001 | MS Sample Id: 646008-001 S | MSD Sample Id: 646008-001 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)	<50.1	1000	980	98	1060	106	70-135	8	35	mg/kg	12.13.19 08:13	
Diesel Range Organics (DRO)	<50.1	1000	880	88	1130	113	70-135	25	35	mg/kg	12.13.19 08:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		128		70-135	%	12.13.19 08:13
o-Terphenyl	99		120		70-135	%	12.13.19 08:13

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3110350 | Matrix: Solid | Date Prep: 12.12.19
MB Sample Id: 7692258-1-BLK | LCS Sample Id: 7692258-1-BKS | LCSD Sample Id: 7692258-1-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	0.106	106	0.103	103	70-130	3	35	mg/kg	12.12.19 11:14	
Toluene	<0.00200	0.100	0.106	106	0.103	103	70-130	3	35	mg/kg	12.12.19 11:14	
Ethylbenzene	<0.00200	0.100	0.105	105	0.102	102	71-129	3	35	mg/kg	12.12.19 11:14	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.212	106	70-135	3	35	mg/kg	12.12.19 11:14	
o-Xylene	<0.00200	0.100	0.105	105	0.103	103	71-133	2	35	mg/kg	12.12.19 11:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		101		70-130	%	12.12.19 11:14
4-Bromofluorobenzene	97		97		101		70-130	%	12.12.19 11:14

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3110350 | Matrix: Soil | Date Prep: 12.12.19
Parent Sample Id: 646036-006 | MS Sample Id: 646036-006 S | MSD Sample Id: 646036-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0401	2.00	2.15	108	1.52	79	70-130	34	35	mg/kg	12.12.19 22:47	
Toluene	0.0206	2.00	2.08	103	1.54	79	70-130	30	35	mg/kg	12.12.19 22:47	
Ethylbenzene	0.169	2.00	2.22	103	1.71	80	71-129	26	35	mg/kg	12.12.19 22:47	
m,p-Xylenes	0.612	4.01	5.48	121	3.94	86	70-135	33	35	mg/kg	12.12.19 22:47	
o-Xylene	0.160	2.00	2.63	124	2.21	106	71-133	17	35	mg/kg	12.12.19 22:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	12.12.19 22:47
4-Bromofluorobenzene	113		126		70-130	%	12.12.19 22:47

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

Page 41 of 68

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 Craslbad, 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: 412038

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc	Company Name:	XTO Energy, Inc
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com; knenmelt@env.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:	BEU 70	Turn Around	
Project Number:	01291986	Routine ☐	
Project Location	32.450875 -104.054989	Rush: 24h	
Sampler's Name:	Kaleb Henry	Due Date: 12/13	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	0.6	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	T-NM-007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH	BTEX	chloride	Sample Comments
	BH01	S	12/11	1502	1'	1	X	X	X	Discrete
	BH01A			1515	1.5'					
	BH01B			1525	2.0'					
	BH01C			1533	2.5'					
	BH01D			1540	3.0'					
	BH01E			1545	4.0'					

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

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			12/12/19 08:20	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Final 1.000
Page 21 of 22
Received by OCD: 12/27/2019 5:53:51 AM

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/12/2019 08:20:00 AM

Work Order #: 646036

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)?	.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#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: Elizabeth McClellan Date: 12/12/2019

Checklist reviewed by: Jessica Kramer Date: 12/13/2019

Jessica Kramer

Analytical Report 647067

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 70

23-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

23-DEC-19

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

Reference: XENCO Report No(s): **647067**
BEU 70
Project Address: 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) 647067. 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. 647067 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 647067

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01F	S	12-19-19 10:30	8 ft	647067-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: BEU 70

Project ID:
Work Order Number(s): *647067*

Report Date: *23-DEC-19*
Date Received: *12/19/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111207 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 647067

LT Environmental, Inc., Arvada, CO

Project Name: BEU 70

Project Id:
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu Dec-19-19 12:05 pm
Report Date: 23-DEC-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	647067-001					
	Field Id:	BH01F					
	Depth:	8- ft					
	Matrix:	SOIL					
	Sampled:	Dec-19-19 10:30					
BTEX by EPA 8021B	***Extracted:***	Dec-19-19 13:21					
	Analyzed:	Dec-19-19 22:46					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Dec-19-19 14:16					
	Analyzed:	Dec-19-19 15:57					
	Units/RL:	mg/kg	RL				
Chloride		231	10.1				
TPH by SW8015 Mod	***Extracted:***	Dec-19-19 12:30					
	Analyzed:	Dec-19-19 15:46					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		1460	50.1				
Motor Oil Range Hydrocarbons (MRO)		113	50.1				
Total GRO-DRO		1460	50.1				
Total TPH		1570	50.1				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 647067

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01F**	Matrix:	Soil	Date Received:	12.19.19 12.05
Lab Sample Id:	647067-001	Date Collected:	12.19.19 10.30	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.19.19 14.16	Basis:	Wet Weight
Seq Number:	3111196				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**231**	10.1	mg/kg	12.19.19 15.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.19.19 12.30	Basis:	Wet Weight
Seq Number:	3111216				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.19.19 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1460**	50.1	mg/kg	12.19.19 15.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**113**	50.1	mg/kg	12.19.19 15.46		1
Total GRO-DRO	PHC628	**1460**	50.1	mg/kg	12.19.19 15.46		1
Total TPH	PHC635	**1570**	50.1	mg/kg	12.19.19 15.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.19.19 15.46	
o-Terphenyl	84-15-1	114	%	70-135	12.19.19 15.46	

Certificate of Analytical Results 647067

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01F**	Matrix:	Soil	Date Received:	12.19.19 12.05
Lab Sample Id:	647067-001	Date Collected:	12.19.19 10.30	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.19.19 13.21	Basis:	Wet Weight
Seq Number:	3111207				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.19.19 22.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.19 22.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.19.19 22.46	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.19.19 22.46	

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 647067

LT Environmental, Inc.

BEU 70

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111196 Matrix: Solid Date Prep: 12.19.19
MB Sample Id: 7692886-1-BLK LCS Sample Id: 7692886-1-BKS LCSD Sample Id: 7692886-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	253	101	90-110	0	20	mg/kg	12.19.19 12:12	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111196 Matrix: Soil Date Prep: 12.19.19
Parent Sample Id: 647019-001 MS Sample Id: 647019-001 S MSD Sample Id: 647019-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	292	201	509	108	514	110	90-110	1	20	mg/kg	12.19.19 13:27	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111196 Matrix: Soil Date Prep: 12.19.19
Parent Sample Id: 647022-001 MS Sample Id: 647022-001 S MSD Sample Id: 647022-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1170	198	1390	111	1370	100	90-110	1	20	mg/kg	12.19.19 14:48	X

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3111216 Matrix: Solid Date Prep: 12.19.19
MB Sample Id: 7692900-1-BLK LCS Sample Id: 7692900-1-BKS LCSD Sample Id: 7692900-1-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)	<50.0	1000	913	91	862	86	70-135	6	35	mg/kg	12.19.19 11:49	
Diesel Range Organics (DRO)	<50.0	1000	773	77	743	74	70-135	4	35	mg/kg	12.19.19 11:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		112		115		70-135	%	12.19.19 11:49
o-Terphenyl	95		108		104		70-135	%	12.19.19 11:49

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3111216 Matrix: Solid Date Prep: 12.19.19
MB Sample Id: 7692900-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.19.19 11:29	

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

QC Summary 647067

LT Environmental, Inc.

BEU 70

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111216 — Matrix: Soil — Date Prep: 12.19.19
Parent Sample Id: 647022-001 — MS Sample Id: 647022-001 S — MSD Sample Id: 647022-001 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)	<50.3	1010	890	88	948	95	70-135	6	35	mg/kg	12.19.19 12:08	
Diesel Range Organics (DRO)	52.6	1010	785	73	826	78	70-135	5	35	mg/kg	12.19.19 12:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		91		70-135	%	12.19.19 12:08
o-Terphenyl	84		84		70-135	%	12.19.19 12:08

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111207 — Matrix: Solid — Date Prep: 12.19.19
MB Sample Id: 7692887-1-BLK — LCS Sample Id: 7692887-1-BKS — LCSD Sample Id: 7692887-1-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	0.0879	88	0.0918	92	70-130	4	35	mg/kg	12.19.19 13:57	
Toluene	<0.00200	0.100	0.0895	90	0.0941	94	70-130	5	35	mg/kg	12.19.19 13:57	
Ethylbenzene	<0.00200	0.100	0.0883	88	0.0932	93	71-129	5	35	mg/kg	12.19.19 13:57	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.198	99	70-135	6	35	mg/kg	12.19.19 13:57	
o-Xylene	<0.00200	0.100	0.0944	94	0.0999	100	71-133	6	35	mg/kg	12.19.19 13:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		101		70-130	%	12.19.19 13:57
4-Bromofluorobenzene	116		115		117		70-130	%	12.19.19 13:57

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111207 — Matrix: Soil — Date Prep: 12.19.19
Parent Sample Id: 647022-001 — MS Sample Id: 647022-001 S — MSD Sample Id: 647022-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0829	82	0.0830	82	70-130	0	35	mg/kg	12.19.19 14:35	
Toluene	0.00226	0.101	0.0844	81	0.0827	80	70-130	2	35	mg/kg	12.19.19 14:35	
Ethylbenzene	0.00668	0.101	0.0816	74	0.0863	79	71-129	6	35	mg/kg	12.19.19 14:35	
m,p-Xylenes	0.0145	0.202	0.183	83	0.169	76	70-135	8	35	mg/kg	12.19.19 14:35	
o-Xylene	0.0111	0.101	0.0898	78	0.0845	73	71-133	6	35	mg/kg	12.19.19 14:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	12.19.19 14:35
4-Bromofluorobenzene	113		119		70-130	%	12.19.19 14:35

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: 647067

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:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	enaka@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	BEU 70	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	Eddy County	Rush: 24hour	
Sampler's Name:	Elizabeth Naka	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.8	Thermometer ID		
Received Intact:	(Yes) No	TNM007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01F	S	12/19/19	1030	8'	1	X	X	X

Elizabeth Naka

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 Elizabeth Naka		12/19/19 12:05	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 12/27/2019 5:53:51 AM

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/19/2019 12:05:00 PM

Work Order #: 647067

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#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**
#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: Martha Castro Date: 12/19/2019

Checklist reviewed by: Jessica Kramer Date: 12/20/2019

Jessica Kramer

Analytical Report 647304

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 70

012919286

23-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

23-DEC-19

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

Reference: XENCO Report No(s): **647304**
BEU 70
Project Address: Eddy

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) 647304. 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. 647304 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 647304

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01G	S	12-20-19 14:37	10 ft	647304-001
BH01H	S	12-20-19 15:00	11 ft	647304-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: BEU 70

Project ID:	*012919286*	Report Date:	*23-DEC-19*
Work Order Number(s):	*647304*	Date Received:	*12/20/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111387 Chloride by EPA 300
Lab Sample ID 647304-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647304-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3111391 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 647304

LT Environmental, Inc., Arvada, CO

Project Name: BEU 70

Project Id: 012919286
Contact: Dan Moir
Project Location: Eddy

Date Received in Lab: Fri Dec-20-19 04:00 pm
Report Date: 23-DEC-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	647304-001		647304-002					
	Field Id:	BH01G		BH01H					
	Depth:	10- ft		11- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-20-19 14:37		Dec-20-19 15:00					
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **					
	Analyzed:	Dec-20-19 23:48		Dec-21-19 00:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00198	0.00198				
Toluene		<0.00200	0.00200	<0.00198	0.00198				
Ethylbenzene		0.00225	0.00200	0.00795	0.00198				
m,p-Xylenes		0.0164	0.00399	0.0661	0.00396				
o-Xylene		0.00289	0.00200	0.0118	0.00198				
Total Xylenes		0.0193	0.00200	0.0779	0.00198				
Total BTEX		0.0215	0.00200	0.0859	0.00198				
Chloride by EPA 300	***Extracted:***	Dec-20-19 16:30		Dec-20-19 16:30					
	Analyzed:	Dec-20-19 19:24		Dec-20-19 19:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		397	10.0	186	9.98				
TPH by SW8015 Mod	***Extracted:***	Dec-20-19 17:00		Dec-20-19 17:00					
	Analyzed:	Dec-20-19 18:43		Dec-20-19 19:03					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.3	50.3				
Diesel Range Organics (DRO)		778	50.3	997	50.3				
Motor Oil Range Hydrocarbons (MRO)		63.3	50.3	74.1	50.3				
Total GRO-DRO		778	50.3	997	50.3				
Total TPH		841	50.3	1070	50.3				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 647304

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01G**	Matrix:	Soil	Date Received:	12.20.19 16.00
Lab Sample Id:	647304-001	Date Collected:	12.20.19 14.37	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 16.30	Basis:	Wet Weight
Seq Number:	3111387				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**397**	10.0	mg/kg	12.20.19 19.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.20.19 17.00	Basis:	Wet Weight
Seq Number:	3111445				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.20.19 18.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**778**	50.3	mg/kg	12.20.19 18.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**63.3**	50.3	mg/kg	12.20.19 18.43		1
Total GRO-DRO	PHC628	**778**	50.3	mg/kg	12.20.19 18.43		1
Total TPH	PHC635	**841**	50.3	mg/kg	12.20.19 18.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.20.19 18.43	
o-Terphenyl	84-15-1	101	%	70-135	12.20.19 18.43	

Certificate of Analytical Results 647304

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01G**	Matrix:	Soil	Date Received:	12.20.19 16.00
Lab Sample Id:	647304-001	Date Collected:	12.20.19 14.37	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 14.00	Basis:	Wet Weight
Seq Number:	3111391				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.19 23.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.19 23.48	U	1
Ethylbenzene	100-41-4	**0.00225**	0.00200	mg/kg	12.20.19 23.48		1
m,p-Xylenes	179601-23-1	**0.0164**	0.00399	mg/kg	12.20.19 23.48		1
o-Xylene	95-47-6	**0.00289**	0.00200	mg/kg	12.20.19 23.48		1
Total Xylenes	1330-20-7	**0.0193**	0.00200	mg/kg	12.20.19 23.48		1
Total BTEX		**0.0215**	0.00200	mg/kg	12.20.19 23.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.20.19 23.48	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.20.19 23.48	

Certificate of Analytical Results 647304

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01H**	Matrix:	Soil	Date Received:	12.20.19 16.00
Lab Sample Id:	647304-002	Date Collected:	12.20.19 15.00	Sample Depth:	11 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 16.30	Basis:	Wet Weight
Seq Number:	3111387				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**186**	9.98	mg/kg	12.20.19 19.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.20.19 17.00	Basis:	Wet Weight
Seq Number:	3111445				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.20.19 19.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**997**	50.3	mg/kg	12.20.19 19.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.1**	50.3	mg/kg	12.20.19 19.03		1
Total GRO-DRO	PHC628	**997**	50.3	mg/kg	12.20.19 19.03		1
Total TPH	PHC635	**1070**	50.3	mg/kg	12.20.19 19.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.20.19 19.03	
o-Terphenyl	84-15-1	104	%	70-135	12.20.19 19.03	

Certificate of Analytical Results 647304

LT Environmental, Inc., Arvada, CO

BEU 70

Sample Id:	**BH01H**	Matrix:	Soil	Date Received:	12.20.19 16.00
Lab Sample Id:	647304-002	Date Collected:	12.20.19 15.00	Sample Depth:	11 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 14.00	Basis:	Wet Weight
Seq Number:	3111391				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.21.19 00.07	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.21.19 00.07	U	1
Ethylbenzene	100-41-4	**0.00795**	0.00198	mg/kg	12.21.19 00.07		1
m,p-Xylenes	179601-23-1	**0.0661**	0.00396	mg/kg	12.21.19 00.07		1
o-Xylene	95-47-6	**0.0118**	0.00198	mg/kg	12.21.19 00.07		1
Total Xylenes	1330-20-7	**0.0779**	0.00198	mg/kg	12.21.19 00.07		1
Total BTEX		**0.0859**	0.00198	mg/kg	12.21.19 00.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.21.19 00.07	
4-Bromofluorobenzene	460-00-4	129	%	70-130	12.21.19 00.07	

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 647304

LT Environmental, Inc.

BEU 70

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111387 Matrix: Solid Date Prep: 12.20.19
MB Sample Id: 7693007-1-BLK LCS Sample Id: 7693007-1-BKS LCSD Sample Id: 7693007-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	266	106	267	107	90-110	0	20	mg/kg	12.20.19 16:58	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111387 Matrix: Soil Date Prep: 12.20.19
Parent Sample Id: 647276-003 MS Sample Id: 647276-003 S MSD Sample Id: 647276-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.68	199	210	102	219	106	90-110	4	20	mg/kg	12.20.19 17:15	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3111387 Matrix: Soil Date Prep: 12.20.19
Parent Sample Id: 647304-001 MS Sample Id: 647304-001 S MSD Sample Id: 647304-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	397	201	624	113	623	112	90-110	0	20	mg/kg	12.20.19 19:30	X

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3111445 Matrix: Solid Date Prep: 12.20.19
MB Sample Id: 7693100-1-BLK LCS Sample Id: 7693100-1-BKS LCSD Sample Id: 7693100-1-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)	<13.9	1000	971	97	894	89	70-135	8	35	mg/kg	12.20.19 17:03	
Diesel Range Organics (DRO)	<11.5	1000	802	80	792	79	70-135	1	35	mg/kg	12.20.19 17:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		118		123		70-135	%	12.20.19 17:03
o-Terphenyl	135		110		109		70-135	%	12.20.19 17:03

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Seq Number: 3111445 Matrix: Solid Date Prep: 12.20.19
MB Sample Id: 7693100-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.20.19 16:44	

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

QC Summary 647304

LT Environmental, Inc.

BEU 70

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111445 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647303-002 — MS Sample Id: 647303-002 S — MSD Sample Id: 647303-002 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)	<13.9	1000	914	91	1010	101	70-135	10	35	mg/kg	12.20.19 17:23	
Diesel Range Organics (DRO)	15.4	1000	963	95	1030	102	70-135	7	35	mg/kg	12.20.19 17:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		109		70-135	%	12.20.19 17:23
o-Terphenyl	98		101		70-135	%	12.20.19 17:23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111391 — Matrix: Solid — Date Prep: 12.20.19
MB Sample Id: 7693013-1-BLK — LCS Sample Id: 7693013-1-BKS — LCSD Sample Id: 7693013-1-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	0.0999	100	0.0942	94	70-130	6	35	mg/kg	12.20.19 16:16	
Toluene	<0.00200	0.100	0.103	103	0.0950	95	70-130	8	35	mg/kg	12.20.19 16:16	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0934	93	71-129	9	35	mg/kg	12.20.19 16:16	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.197	99	70-135	9	35	mg/kg	12.20.19 16:16	
o-Xylene	<0.00200	0.100	0.109	109	0.0992	99	71-133	9	35	mg/kg	12.20.19 16:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		106		70-130	%	12.20.19 16:16
4-Bromofluorobenzene	112		117		118		70-130	%	12.20.19 16:16

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111391 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647280-001 — MS Sample Id: 647280-001 S — MSD Sample Id: 647280-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0781	78	0.0772	77	70-130	1	35	mg/kg	12.20.19 16:54	
Toluene	0.0132	0.0996	0.100	87	0.0980	85	70-130	2	35	mg/kg	12.20.19 16:54	
Ethylbenzene	<0.00199	0.0996	0.0883	89	0.0780	78	71-129	12	35	mg/kg	12.20.19 16:54	
m,p-Xylenes	<0.00398	0.199	0.187	94	0.164	82	70-135	13	35	mg/kg	12.20.19 16:54	
o-Xylene	<0.00199	0.0996	0.0941	94	0.0836	84	71-133	12	35	mg/kg	12.20.19 16:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		99		70-130	%	12.20.19 16:54
4-Bromofluorobenzene	119		122		70-130	%	12.20.19 16:54

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

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Chain of Custody

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

Work Order No: 447304

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:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	wmather@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	BEU 70	Turn Around	
Project Number:	012919286	Routine	☐
P.O. Number:	Eddy	Rush:	24hr
Sampler's Name:	Will Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.6	Thermometer ID	T-MM-007
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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01G	S	12/20/19	14:37	10'	1	X	X	X
BH01H	S	12/20/19	15:00	11'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

discrete

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

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

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	W. Mather		12/20/19 10:00	2			
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Received by OCD: 12/27/2019 5:53:51 AM
Final 1.001
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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/20/2019 04:00:00 PM

Work Order #: 647304

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)?	1.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#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: Elizabeth McClellan Date: 12/20/2019

Checklist reviewed by: Jessica Kramer Date: 12/23/2019

Jessica Kramer