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	NAB1907138392
District RP	2 2RP-5294
Facility ID	
Application ID	pAB1907137360

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)* NAB1907138392
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.453126° Longitude -104.105952°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit 039	Site Type Production Well and Storage Facility
Date Release Discovered 2/21/2019	API# *(if applicable)* 30-015-20945

Unit Letter	Section	Township	Range	County
G	29	21S	28E	Eddy

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

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) 5.7	Volume Recovered (bbls) 5
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) 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 flange at the base of an oil tank corroded and released fluid to the earthen containment. Vacuum trucks removed standing fluid. The tank was removed from service until it can be repaired. An environmental contractor has been retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2 2RP-5294
Facility ID	
Application ID	pAB1907137360

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

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: 3/7/2019

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

OCD Only

Received by: Date: 3/12/2019

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
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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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: ____10/25/2019_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
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Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

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

October 25, 2019

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

RE: Closure Request
Big Eddy Unit 039
Remediation Permit Number 2RP-5294
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, excavation, and soil sampling activities at the Big Eddy Unit 039 (Site) located in unit G, Section 29, Township 21 South, Range 28 East, in Eddy County, New Mexico (Figure 1). This closure request is being submitted subsequent to a denial of an original Deferral Request submitted to the New Mexico Oil Conservation Division (NMOCD) in May 2019. Additional excavation was conducted after the Deferral Request was denied and shallow groundwater was confirmed. Based on the results of the final soil sampling event, XTO is requesting no further action for this release.

BACKGROUND

On February 21, 2019, a corroded flange at the base of a crude oil tank caused the release of approximately 5.7 barrels (bbl) of crude oil into the earthen containment. The initial Form C-141 was submitted to the NMOCD on March 7, 2019, and was assigned Remediation Permit (RP) Number is 2RP-5294. The initial Form C-141 is included as Attachment 1. LTE personnel collected preliminary and excavation soil samples from within the release extent in April 2019 and May 2019, to assess the lateral and vertical extent of impacts to soil. The preliminary and excavation samples are depicted on Figure 2 and Figure 3, respectively. On May 22, 2019, LTE submitted a Deferral Request due to residual impacted soil left in place around and beneath active process equipment and for compliance with XTO's safety policy regarding earth-moving activities within 2 feet of active process equipment.

On May 28, 2019, the NMOCD denied deferral, via email, based on the following reasoning:

> *With the depth to groundwater being so shallow and the High Karst, the risk to groundwater certainly exists. One option would be to drill a borehole and discover what the depth to Groundwater actually is. If it's less than 50 feet, we would need*

you to move the lone tank and remediate the contamination left behind at SW03. If it's over 50 feet we would be willing to approve the deferral.

ADDITIONAL SITE ACTIVITIES

During June 2019, LTE personnel returned to the Site to address concerns outlined in the May 28, 2019, email from the NMOCD. On June 4, 2019, LTE personnel oversaw the drilling of a borehole (BH01) to determine depth to groundwater at the Site. The borehole was advanced utilizing a truck-mounted sonic drill rig. The location of the borehole was in the pasture area approximately 118 feet southeast from the point of release. Fluid was encountered in borehole BH01 at approximately 22 feet below ground surface (bgs) and the total depth of the borehole was approximately 34 feet bgs. A grab sample of the fluid was collected from BH01 on June 7, 2019. A lithologic/soil sampling log for BH01 is included in Attachment 2, and the location is depicted on Figure 1.

Based on the results of the drilling event, XTO utilized mechanical equipment to remove the crude oil tank located in the center of the release extent, in the area that was not previously excavated. Following the removal of the tank, LTE returned to the Site to oversee the excavation of impacted soil in this area. On September 30, 2019, LTE personnel collected a composite soil sample (FS05), located on the floor of the final excavation extent at a depth of 5 feet bgs. The confirmation soil sample location and the final excavation extent are depicted on Figure 4. The soil sample was placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) following United States Environmental Protection Agency (USEPA) Method 8021B; total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The groundwater sample was analyzed for BTEX following USEPA Method 8021B; TPH-GRO, TPH-DRO, and TPH-ORO following USEPA Method 8015M/D; total dissolved solids (TDS) following USEPA Method SM2540C, and chloride following USEPA Method 300.0.

ANALYTICAL RESULTS

Laboratory analytical results indicated that the grab sample WS01, collected from BH01, indicated concentrations of BTEX and TPH were not detected above the laboratory reporting limit. Chloride and total dissolved solids (TDS) concentrations in WS01 were 295 milligrams per liter (mg/L) and 2,940 mg/L, respectively. Laboratory analytical results are summarized in Table 1.

Laboratory analytical results indicated that excavation floor sample FS05 was compliant with the NMOCD Table 1 Closure Criteria (Closure Criteria) for benzene, BTEX, TPH, and chloride. Soil laboratory analytical results are summarized in Table 2, and the complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

A total of approximately 130 cubic yards of impacted soil was excavated from the Site. Laboratory analytical results for the initial excavation and the confirmation floor sample from the final excavation, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was required.

Excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5294. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1 and a Photographic Log is included as Attachment 4.

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Excavation Confirmation Soil Sample Locations
Table 1	Water Analytical Results
Table 2	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5294)
Attachment 2	Lithologic/Soil Sample Log
Attachment 3	Laboratory Analytical Reports
Attachment 4	Photographic Log

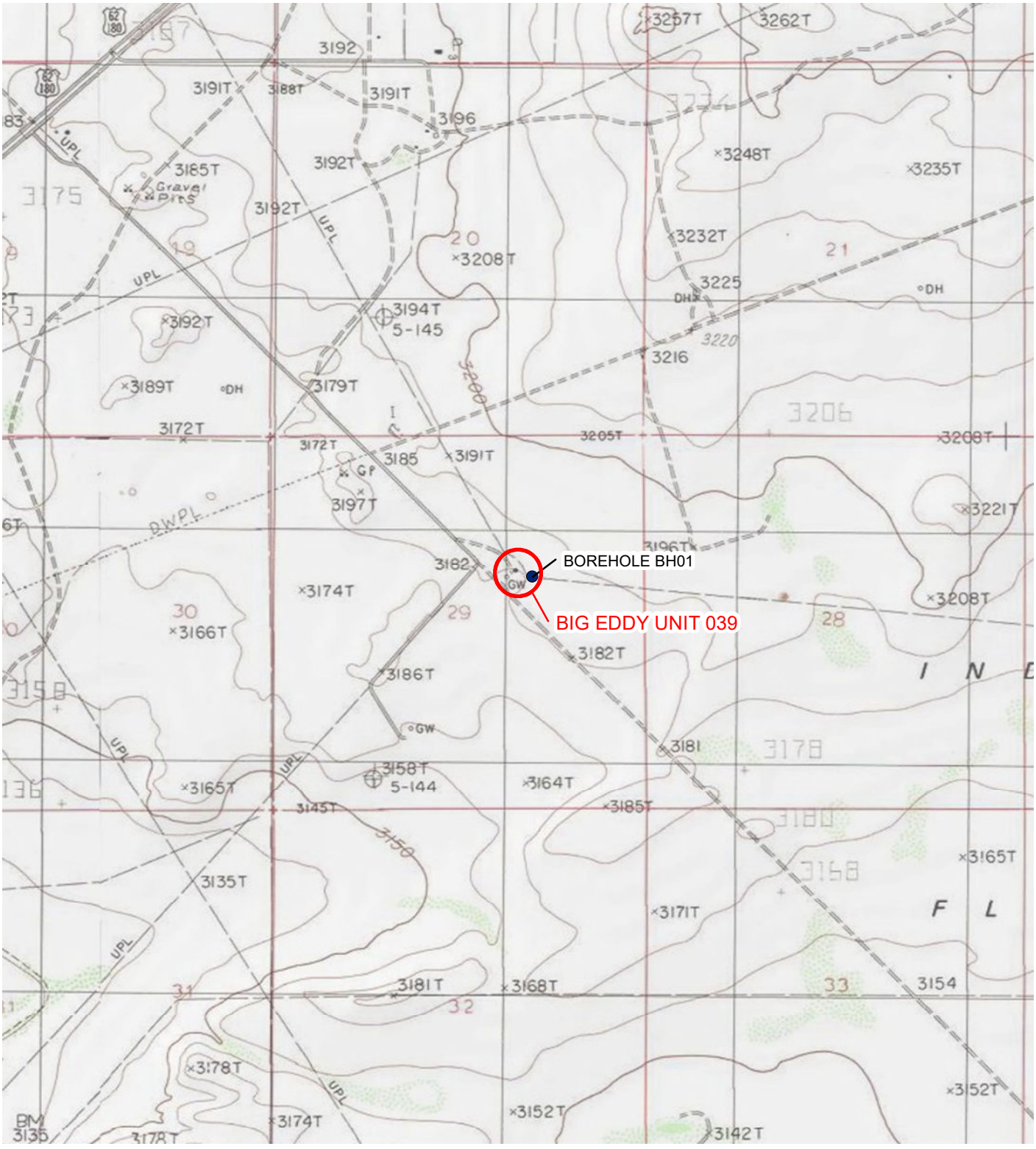


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

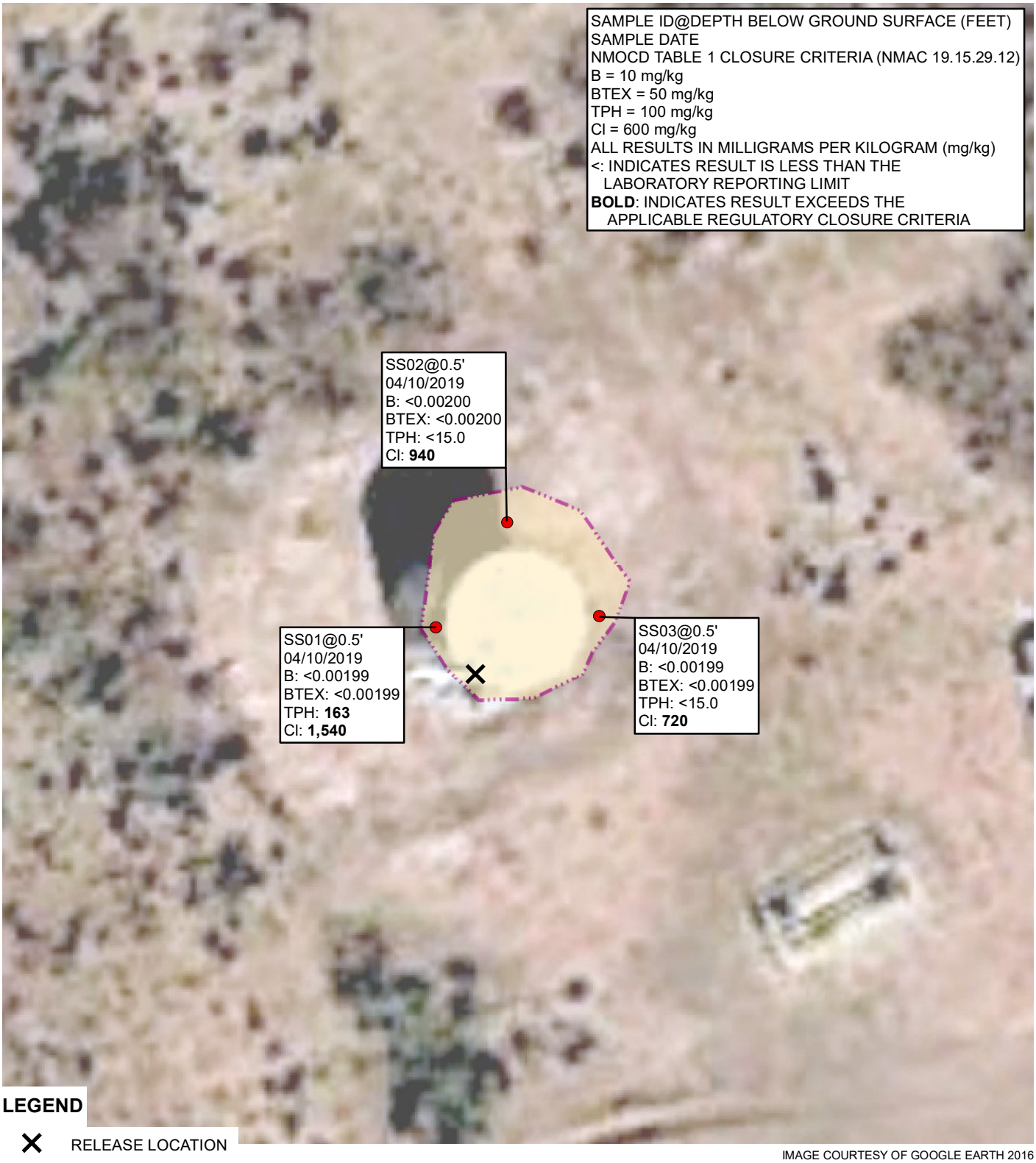
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5294

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT 039
UNIT G SEC 29 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG01_SL_5294_2019.mxd



LEGEND

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2016

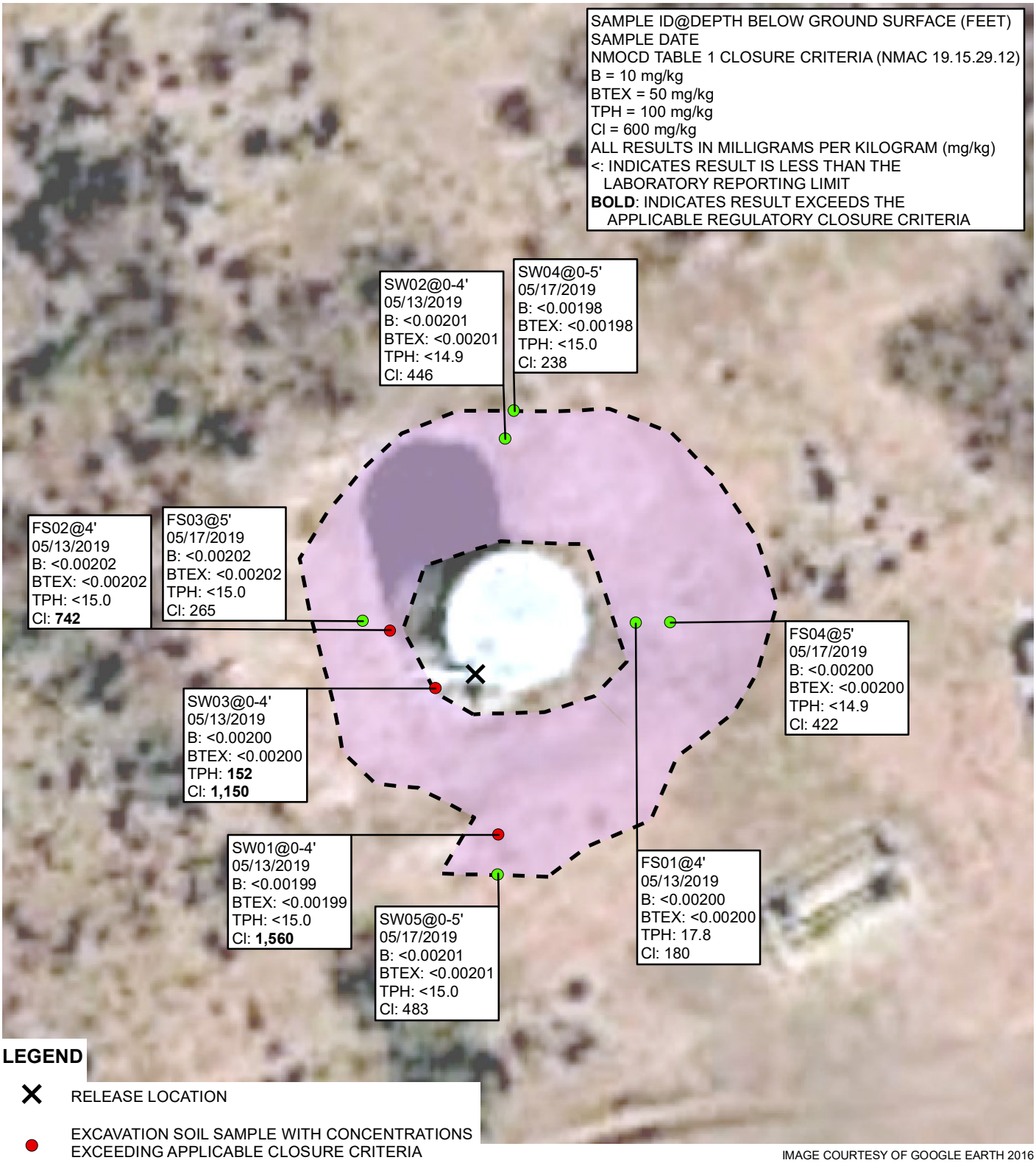
0 10 20
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5294

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 039
UNIT G SEC 29 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG02_PRELIMINARY_5294_051719.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5294

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 039
UNIT G SEC 29 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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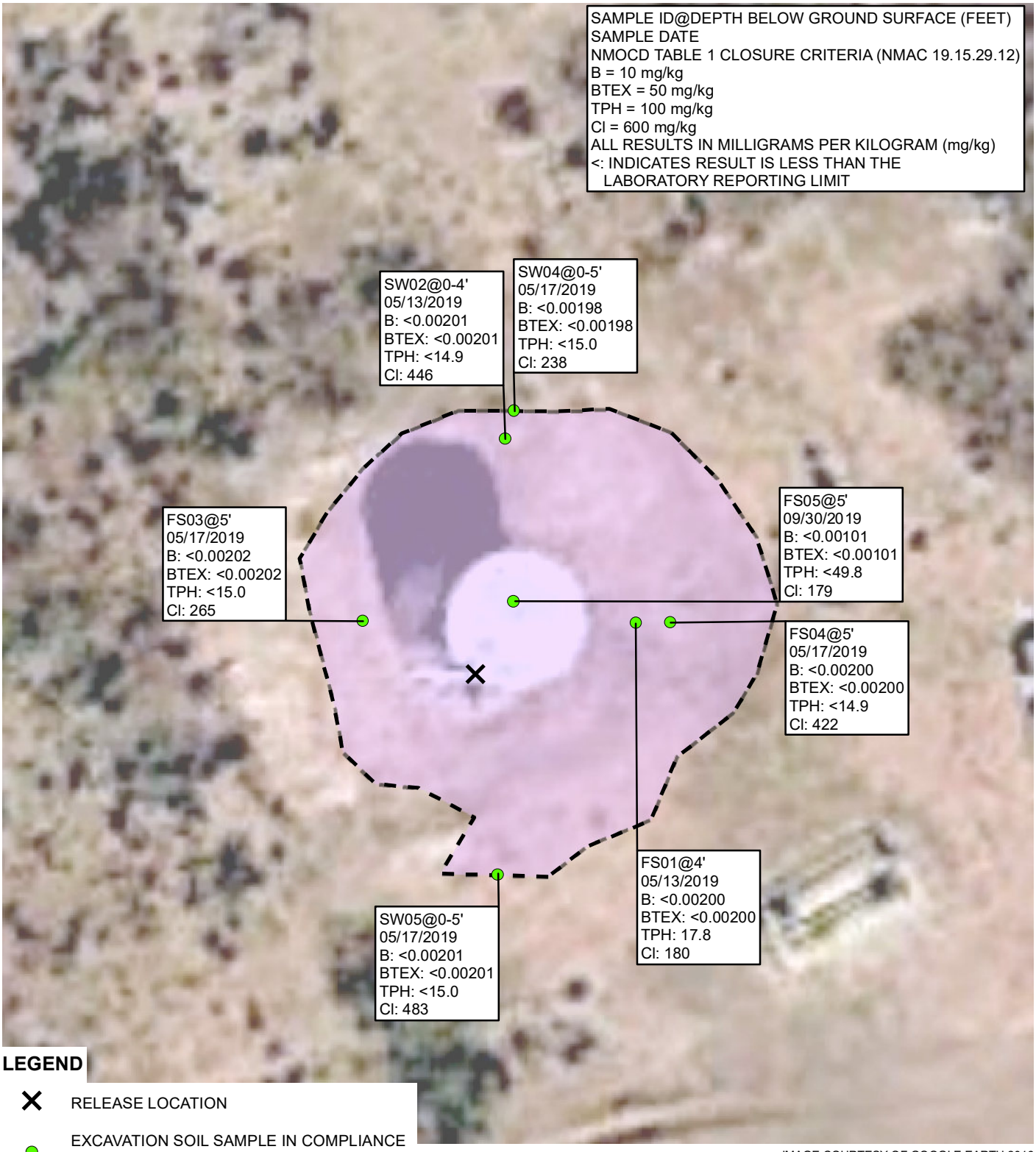

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5294

FIGURE 4
EXCAVATION CONFIRMATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 039
UNIT G SEC 29 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG04_EXCAVATION_5294.mxd

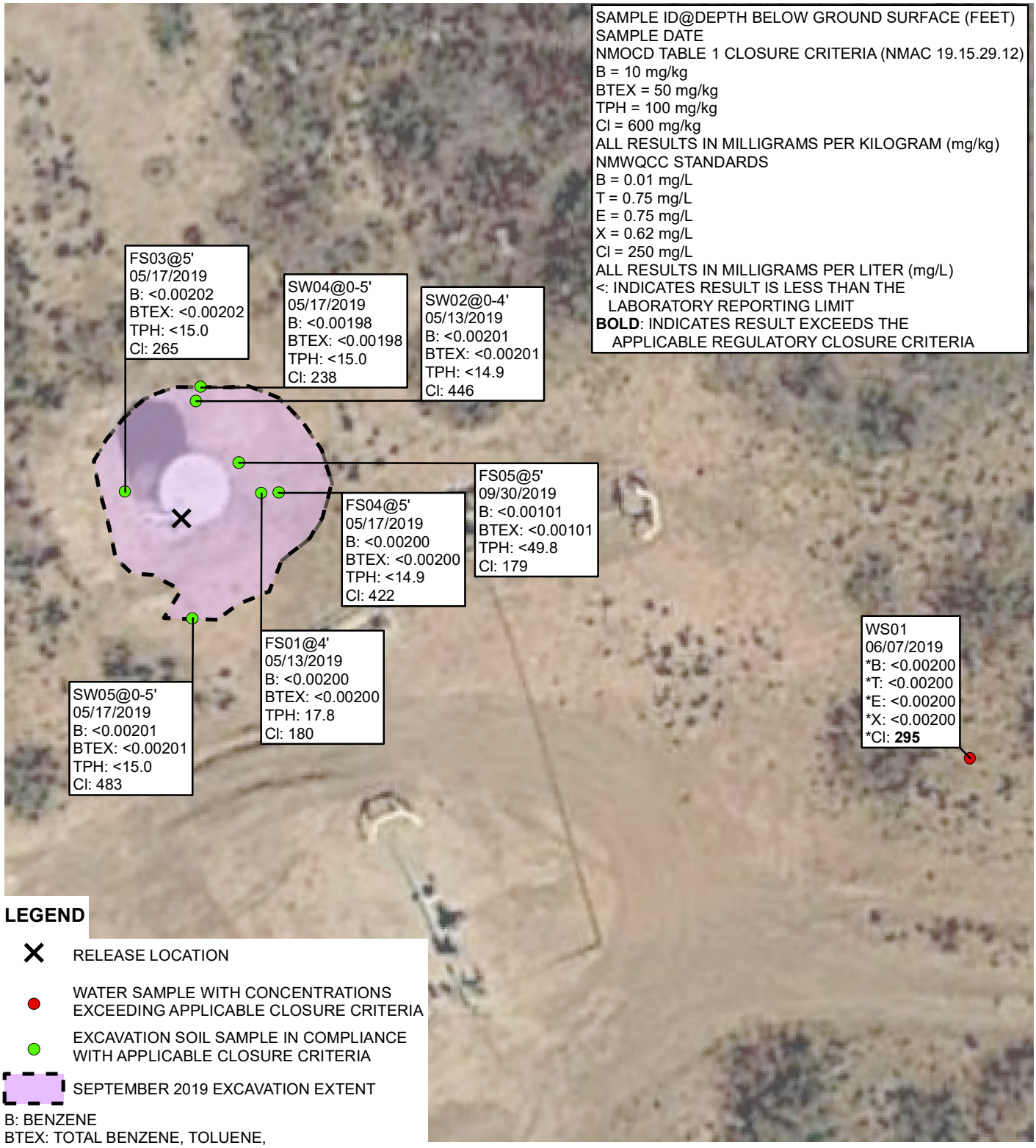

FIGURE 5
EXCAVATION CONFIRMATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 039
UNIT G SEC 29 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919036_BIG EDDY UNIT 039\012919036_FIG05_EXCAVATION_5294.mxd

TABLE 1
WATER ANALYTICAL RESULTS

BIG EDDY UNIT 039
REMEDIATION PERMIT NUMBER 2RP-5294
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	ORO (mg/L)	Chloride (mg/L)	Total Dissolved Solids (mg/L)
WS01	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<1.28	<1.28	<1.28	**295**	2,940
NMWQCC Standard		**0.01**	**0.75**	**0.75**	**0.62**	**NE**	**NE**	**NE**	**250**	**NE**

Notes:

DRO - diesel range organics
GRO - gasoline range organics
ORO - motor oil range organics
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard
NMWQCC - New Mexico Water Quality Control Commission
mg/L - milligrams per liter
NE - not established

TABLE 2
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 039
REMEDIATION PERMIT NUMBER 2RP-5294
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	04/10/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	91.8	71.4	91.8	**163**	**1,540**
SS02	0.5	04/10/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**940**
SS03	0.5	04/10/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	**720**
SW01	0 - 4	05/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	**1,560**
SW02	0 - 4	05/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	446
SW03	0 - 4	05/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	134	18.3	134	**152**	**1,150**
SW04	0 - 5	05/17/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	238
SW05	0 - 5	05/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	483
FS01	4	05/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	17.8	<15.0	17.8	17.8	180
FS02	4	05/13/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	**742**
FS03	5	05/17/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	265
FS04	5	05/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	422
FS05	5	09/30/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	179
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

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

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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	NAB1907138392
District RP	2 2RP-5294
Facility ID	
Application ID	pAB1907137360

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)* NAB1907138392
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.453126° Longitude -104.105952°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit 039	Site Type Production Well and Storage Facility
Date Release Discovered 2/21/2019	API# *(if applicable)* 30-015-20945

Unit Letter	Section	Township	Range	County
G	29	21S	28E	Eddy

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

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) 5.7	Volume Recovered (bbls) 5
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) 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 flange at the base of an oil tank corroded and released fluid to the earthen containment. Vacuum trucks removed standing fluid. The tank was removed from service until it can be repaired. An environmental contractor has been retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2 2RP-5294
Facility ID	
Application ID	pAB1907137360

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

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: 3/7/2019

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

OCD Only

Received by: Date: 3/12/2019

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: ____10/25/2019_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907138392
District RP	2RP-5294
Facility ID	
Application ID	pAB1907137360

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: LITHOLOGIC SOIL SAMPLE LOGS

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

Identifier: BH01	Date: 6/4/19
Project Name: BEU 039	RP Number: 2RP-5294

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL	Method: SONIC

Lat/Long: 32.452997, -104.105589	Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	Hole Diameter: 4"	Total Depth: 34'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	531	0.5	N		0–12	1'	ML	SILT, dry, brown - light brown, non-plastic, no odor. (15:30)
D	1112	0.9	N		10	10'	ML	SAA (Same As Above) (15:45)

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

Identifier: BH01	Date: 6/4/19
Project Name: BEU 039	RP Number: 2RP-5294
LITHOLOGIC / SOIL BORING LOG	Logged By: BEN BELILL / Method: SONIC
Lat/Long: / Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.	Hole Diameter: 4" / Total Depth: 34'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
D	<112	1.7	N		20	20'	ML	SAA (15:55)
				WS01	21			
					22			
					23			
					24			

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

Identifier: BH01	Date: 6/4/19
Project Name: BEU 039	RP Number: 2RP-5294

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL	Method: SONIC
Lat/Long:	Field Screening: CHLORIDES, TPH, BTEX, GRO, MRO, and DRO.
Hole Diameter: 4"	Total Depth: 34'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
					25			
					26			
M	<112	0.8	N		27	27'	ML	SILT, moist, brown - light brown, low plasticity, trace clay, no odor. (16:00) * Water Table @ 27'
					28			
					29			
D	<112	3.4	N		30	30'	ML	SILT, dry, brown - light brown, low plasticity, some light gray dry clay, no odor. (16:10)
					31			
					32			
					33			
D	<112	2.5	N		34	34'	ML	SAA (16:15)
					35			EOB @ 34'
					36			

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 620941

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 039

15-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

15-APR-19

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

Reference: XENCO Report No(s): **620941**
BEU 039
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620941. 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. 620941 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04-10-19 09:15	0.5	620941-001
SS02	S	04-10-19 09:20	0.5	620941-002
SS03	S	04-10-19 09:10	0.5	620941-003

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085717 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3085721 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 620366-010 SD.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 620941

LT Environmental, Inc., Arvada, CO

Project Name: BEU 039

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Fri Apr-12-19 10:52 am
Report Date: 15-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	620941-001		620941-002		620941-003			
	Field Id:	SS01		SS02		SS03			
	Depth:	0.5-		0.5-		0.5-			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Apr-10-19 09:15		Apr-10-19 09:20		Apr-10-19 09:10			
BTEX by EPA 8021B	***Extracted:***	Apr-14-19 16:07		Apr-14-19 16:19		Apr-14-19 16:19			
	Analyzed:	Apr-15-19 01:39		Apr-15-19 06:21		Apr-15-19 06:40			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398		
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199		
Chloride by EPA 300	***Extracted:***	Apr-12-19 17:50		Apr-12-19 17:50		Apr-12-19 17:50			
	Analyzed:	Apr-14-19 23:22		Apr-14-19 23:30		Apr-15-19 01:18			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1540	25.2	940	5.04	720	24.8		
TPH by SW8015 Mod	***Extracted:***	Apr-13-19 11:00		Apr-13-19 11:00		Apr-13-19 11:00			
	Analyzed:	Apr-14-19 01:31		Apr-14-19 01:51		Apr-14-19 02:10			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		91.8	15.0	<15.0	15.0	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		71.4	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		163	15.0	<15.0	15.0	<15.0	15.0		
Total GRO-DRO		91.8	15.0	<15.0	15.0	<15.0	15.0		

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-001	Date Collected:	04.10.19 09.15	Sample Depth:	0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.12.19 17.50	Basis:	Wet Weight
Seq Number:	3085674				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1540**	25.2	mg/kg	04.14.19 23.22		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.13.19 11.00	Basis:	Wet Weight
Seq Number:	3085702				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.14.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**91.8**	15.0	mg/kg	04.14.19 01.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**71.4**	15.0	mg/kg	04.14.19 01.31		1
Total TPH	PHC635	**163**	15.0	mg/kg	04.14.19 01.31		1
Total GRO-DRO	PHC628	**91.8**	15.0	mg/kg	04.14.19 01.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.14.19 01.31	
o-Terphenyl	84-15-1	102	%	70-135	04.14.19 01.31	

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-001	Date Collected:	04.10.19 09.15	Sample Depth:	0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.07	Basis:	Wet Weight
Seq Number:	3085717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.15.19 01.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.15.19 01.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.15.19 01.39	
4-Bromofluorobenzene	460-00-4	124	%	70-130	04.15.19 01.39	

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-002	Date Collected:	04.10.19 09.20	Sample Depth:	0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.12.19 17.50	Basis:	Wet Weight
Seq Number:	3085674				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**940**	5.04	mg/kg	04.14.19 23.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.13.19 11.00	Basis:	Wet Weight
Seq Number:	3085702				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.14.19 01.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.14.19 01.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.14.19 01.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.14.19 01.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.14.19 01.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.14.19 01.51	
o-Terphenyl	84-15-1	100	%	70-135	04.14.19 01.51	

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-002	Date Collected:	04.10.19 09.20	Sample Depth:	0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.19	Basis:	Wet Weight
Seq Number:	3085721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.15.19 06.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.15.19 06.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.15.19 06.21	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.15.19 06.21	

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-003	Date Collected:	04.10.19 09.10	Sample Depth:	0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.12.19 17.50	Basis:	Wet Weight
Seq Number:	3085674				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**720**	24.8	mg/kg	04.15.19 01.18		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.13.19 11.00	Basis:	Wet Weight
Seq Number:	3085702				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.14.19 02.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.14.19 02.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.14.19 02.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.14.19 02.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.14.19 02.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.14.19 02.10	
o-Terphenyl	84-15-1	97	%	70-135	04.14.19 02.10	

Certificate of Analytical Results 620941

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.12.19 10.52
Lab Sample Id:	620941-003	Date Collected:	04.10.19 09.10	Sample Depth:	0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.14.19 16.19	Basis:	Wet Weight
Seq Number:	3085721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.15.19 06.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.15.19 06.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.15.19 06.40	
4-Bromofluorobenzene	460-00-4	117	%	70-130	04.15.19 06.40	

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 620941

LT Environmental, Inc.

BEU 039

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085674 Matrix: Solid Date Prep: 04.12.19
MB Sample Id: 7675690-1-BLK LCS Sample Id: 7675690-1-BKS LCSD Sample Id: 7675690-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	259	104	260	104	90-110	0	20	mg/kg	04.14.19 22:39	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085674 Matrix: Soil Date Prep: 04.12.19
Parent Sample Id: 620551-013 MS Sample Id: 620551-013 S MSD Sample Id: 620551-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	629	251	852	89	844	86	90-110	1	20	mg/kg	04.15.19 00:57	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085674 Matrix: Soil Date Prep: 04.12.19
Parent Sample Id: 620943-013 MS Sample Id: 620943-013 S MSD Sample Id: 620943-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.853	249	222	89	275	110	90-110	21	20	mg/kg	04.14.19 23:01	XF

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085702 Matrix: Solid Date Prep: 04.13.19
MB Sample Id: 7675751-1-BLK LCS Sample Id: 7675751-1-BKS LCSD Sample Id: 7675751-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	960	96	936	94	70-135	3	20	mg/kg	04.13.19 19:19	
Diesel Range Organics (DRO)	<8.13	1000	978	98	969	97	70-135	1	20	mg/kg	04.13.19 19:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		123		120		70-135	%	04.13.19 19:19
o-Terphenyl	108		119		115		70-135	%	04.13.19 19:19

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

QC Summary 620941

LT Environmental, Inc.

BEU 039

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085702 Matrix: Soil Date Prep: 04.13.19
Parent Sample Id: 621017-001 MS Sample Id: 621017-001 S MSD Sample Id: 621017-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	911	91	887	89	70-135	3	20	mg/kg	04.13.19 20:18	
Diesel Range Organics (DRO)	<8.11	998	920	92	937	94	70-135	2	20	mg/kg	04.13.19 20:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		117		70-135	%	04.13.19 20:18
o-Terphenyl	114		110		70-135	%	04.13.19 20:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085717 Matrix: Solid Date Prep: 04.14.19
MB Sample Id: 7675773-1-BLK LCS Sample Id: 7675773-1-BKS LCSD Sample Id: 7675773-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.100	101	0.0939	94	70-130	6	35	mg/kg	04.14.19 18:06	
Toluene	<0.00198	0.0992	0.0996	100	0.0951	95	70-130	5	35	mg/kg	04.14.19 18:06	
Ethylbenzene	<0.00198	0.0992	0.105	106	0.0997	100	70-130	5	35	mg/kg	04.14.19 18:06	
m,p-Xylenes	<0.00101	0.198	0.210	106	0.201	101	70-130	4	35	mg/kg	04.14.19 18:06	
o-Xylene	<0.00198	0.0992	0.105	106	0.102	102	70-130	3	35	mg/kg	04.14.19 18:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		96		96		70-130	%	04.14.19 18:06
4-Bromofluorobenzene	105		106		106		70-130	%	04.14.19 18:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3085721 Matrix: Solid Date Prep: 04.14.19
MB Sample Id: 7675776-1-BLK LCS Sample Id: 7675776-1-BKS LCSD Sample Id: 7675776-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0945	95	0.0923	92	70-130	2	35	mg/kg	04.15.19 03:51	
Toluene	<0.00200	0.0998	0.0908	91	0.0898	90	70-130	1	35	mg/kg	04.15.19 03:51	
Ethylbenzene	<0.00200	0.0998	0.0937	94	0.0933	93	70-130	0	35	mg/kg	04.15.19 03:51	
m,p-Xylenes	<0.00399	0.200	0.185	93	0.184	92	70-130	1	35	mg/kg	04.15.19 03:51	
o-Xylene	<0.00200	0.0998	0.0951	95	0.0946	95	70-130	1	35	mg/kg	04.15.19 03:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		98		70-130	%	04.15.19 03:51
4-Bromofluorobenzene	101		102		102		70-130	%	04.15.19 03:51

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

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

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

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

QC Summary 620941

LT Environmental, Inc.

BEU 039

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

Seq Number: 3085717 Matrix: Soil Date Prep: 04.14.19

Parent Sample Id: 620919-001 MS Sample Id: 620919-001 S MSD Sample Id: 620919-001 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	0.0550	55	0.0570	57	70-130	4	35	mg/kg	04.14.19 18:44	X
Toluene	<0.00199	0.0996	0.0675	68	0.0710	71	70-130	5	35	mg/kg	04.14.19 18:44	X
Ethylbenzene	<0.00199	0.0996	0.0663	67	0.0699	70	70-130	5	35	mg/kg	04.14.19 18:44	X
m,p-Xylenes	0.00273	0.199	0.141	69	0.149	73	70-130	6	35	mg/kg	04.14.19 18:44	X
o-Xylene	<0.00199	0.0996	0.0722	72	0.0772	77	70-130	7	35	mg/kg	04.14.19 18:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		88		70-130	%	04.14.19 18:44
4-Bromofluorobenzene	123		128		70-130	%	04.14.19 18:44

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

Seq Number: 3085721 Matrix: Soil Date Prep: 04.14.19

Parent Sample Id: 620366-010 MS Sample Id: 620366-010 S MSD Sample Id: 620366-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0806	81	0.0292	29	70-130	94	35	mg/kg	04.15.19 04:29	XF
Toluene	<0.000457	0.100	0.0774	77	0.0422	42	70-130	59	35	mg/kg	04.15.19 04:29	XF
Ethylbenzene	<0.000567	0.100	0.0767	77	0.0487	48	70-130	45	35	mg/kg	04.15.19 04:29	XF
m,p-Xylenes	0.00120	0.201	0.153	76	0.0932	46	70-130	49	35	mg/kg	04.15.19 04:29	XF
o-Xylene	0.000651	0.100	0.0787	78	0.0497	49	70-130	45	35	mg/kg	04.15.19 04:29	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		91		70-130	%	04.15.19 04:29
4-Bromofluorobenzene	108		148	**	70-130	%	04.15.19 04:29

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

Chain of Custody

Work Order No: 1e204941

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrel
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:	Carlsbad NM
Phone:	432.704.5178	Email:	rmcafee@Ltenv.com

Work Order Comments

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

Project Name:	BEU 039	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5294	Rush: 5 day	
Sampler's Name:	Robert M.	Due Date: 04/15/19	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	04/10/19	0915	0.5	1	X	X	X	discrete
SS02	↓	↓	0920	0.5	↓	X	X	X	↓
SS03	↓	↓	0910	0.5	↓	X	X	X	↓

Work Order Notes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert McGuire	Taylor Hay	4/10/19 @ 1545	2 Taylor Hay	Brad	4/12/19 1052
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

77495147590

Final 1.000

Page 16 of 18

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/12/2019 10:52:00 AM

Work Order #: 620941

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04/12/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/12/2019

Kalei Stout

Analytical Report 624165

for

LT Environmental, Inc.

Project Manager: Ashley Ager

BEU 039

15-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

15-MAY-19

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

Reference: XENCO Report No(s): **624165**
BEU 039
Project Address: Delaware Basin

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624165. 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. 624165 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

Sample Cross Reference 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	05-13-19 09:40	4 ft	624165-001
FS02	S	05-13-19 09:50	4 ft	624165-002
SW01	S	05-13-19 09:30	0 - 4 ft	624165-003
SW02	S	05-13-19 09:55	0 - 4 ft	624165-004
SW03	S	05-13-19 10:40	0 - 4 ft	624165-005

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089030 Inorganic Anions by EPA 300

Lab Sample ID 624167-008 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: 624165-003, -004, -005.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3089051 BTEX by EPA 8021B

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

Certificate of Analysis Summary 624165

LT Environmental, Inc., Arvada, CO

Project Name: BEU 039

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

Date Received in Lab: Tue May-14-19 11:30 am
Report Date: 15-MAY-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	624165-001		624165-002		624165-003		624165-004		624165-005	
	Field Id:	FS01		FS02		SW01		SW02		SW03	
	Depth:	4- ft		4- ft		0-4 ft		0-4 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-13-19 09:40		May-13-19 09:50		May-13-19 09:30		May-13-19 09:55		May-13-19 10:40	
BTEX by EPA 8021B	***Extracted:***	May-14-19 11:45		May-14-19 11:45		May-14-19 11:45		May-14-19 11:45		May-14-19 11:45	
	Analyzed:	May-14-19 19:00		May-14-19 19:19		May-14-19 19:38		May-14-19 19:57		May-14-19 20:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	May-14-19 15:45		May-14-19 15:45		May-14-19 16:15		May-14-19 16:15		May-14-19 16:15	
	Analyzed:	May-14-19 19:37		May-14-19 19:44		May-14-19 18:38		May-14-19 19:00		May-14-19 19:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		180	5.05	742	5.00	1560	25.0	446	4.96	1150	5.00
TPH by SW8015 Mod	***Extracted:***	May-14-19 17:00		May-14-19 17:00		May-14-19 17:00		May-14-19 17:00		May-14-19 17:00	
	Analyzed:	May-15-19 03:51		May-15-19 04:11		May-15-19 04:31		May-15-19 04:50		May-15-19 05:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	134	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	18.3	15.0
Total TPH		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	152	15.0
Total GRO-DRO		17.8	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	134	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-001	Date Collected:	05.13.19 09.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.14.19 15.45	Basis:	Wet Weight
Seq Number:	3089023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**180**	5.05	mg/kg	05.14.19 19.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.19 17.00	Basis:	Wet Weight
Seq Number:	3089071				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 03.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.8**	15.0	mg/kg	05.15.19 03.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.15.19 03.51	U	1
Total TPH	PHC635	**17.8**	15.0	mg/kg	05.15.19 03.51		1
Total GRO-DRO	PHC628	**17.8**	15.0	mg/kg	05.15.19 03.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.15.19 03.51	
o-Terphenyl	84-15-1	100	%	70-135	05.15.19 03.51	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-001	Date Collected:	05.13.19 09.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.14.19 11.45	Basis:	Wet Weight
Seq Number:	3089051				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.14.19 19.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.14.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	05.14.19 19.00	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.14.19 19.00	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-002	Date Collected:	05.13.19 09.50	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.14.19 15.45	Basis:	Wet Weight
Seq Number:	3089023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**742**	5.00	mg/kg	05.14.19 19.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.19 17.00	Basis:	Wet Weight
Seq Number:	3089071				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 04.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.15.19 04.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.15.19 04.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.19 04.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.15.19 04.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.15.19 04.11	
o-Terphenyl	84-15-1	101	%	70-135	05.15.19 04.11	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-002	Date Collected:	05.13.19 09.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.14.19 11.45	Basis:	Wet Weight
Seq Number:	3089051				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.14.19 19.19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.14.19 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	05.14.19 19.19	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.14.19 19.19	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-003	Date Collected:	05.13.19 09.30	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.14.19 16.15	Basis:	Wet Weight
Seq Number:	3089030				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1560**	25.0	mg/kg	05.14.19 18.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.19 17.00	Basis:	Wet Weight
Seq Number:	3089071				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.19 04.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.15.19 04.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.15.19 04.31	
o-Terphenyl	84-15-1	102	%	70-135	05.15.19 04.31	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-003	Date Collected:	05.13.19 09.30	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.14.19 11.45	Basis:	Wet Weight
Seq Number:	3089051				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.14.19 19.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.14.19 19.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.14.19 19.38	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.14.19 19.38	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-004	Date Collected:	05.13.19 09.55	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.14.19 16.15	Basis:	Wet Weight
Seq Number:	3089030				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**446**	4.96	mg/kg	05.14.19 19.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.19 17.00	Basis:	Wet Weight
Seq Number:	3089071				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.15.19 04.50	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.15.19 04.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.15.19 04.50	
o-Terphenyl	84-15-1	101	%	70-135	05.15.19 04.50	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-004	Date Collected:	05.13.19 09.55	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.14.19 11.45	Basis:	Wet Weight
Seq Number:	3089051				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.14.19 19.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.14.19 19.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.14.19 19.57	
4-Bromofluorobenzene	460-00-4	102	%	70-130	05.14.19 19.57	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-005	Date Collected:	05.13.19 10.40	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.14.19 16.15	Basis:	Wet Weight
Seq Number:	3089030				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1150**	5.00	mg/kg	05.14.19 19.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.19 17.00	Basis:	Wet Weight
Seq Number:	3089071				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.15.19 05.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**134**	15.0	mg/kg	05.15.19 05.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.3**	15.0	mg/kg	05.15.19 05.10		1
Total TPH	PHC635	**152**	15.0	mg/kg	05.15.19 05.10		1
Total GRO-DRO	PHC628	**134**	15.0	mg/kg	05.15.19 05.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.15.19 05.10	
o-Terphenyl	84-15-1	104	%	70-135	05.15.19 05.10	

Certificate of Analytical Results 624165

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.14.19 11.30
Lab Sample Id:	624165-005	Date Collected:	05.13.19 10.40	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.14.19 11.45	Basis:	Wet Weight
Seq Number:	3089051				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.14.19 20.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.14.19 20.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.14.19 20.16	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.14.19 20.16	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 624165

LT Environmental, Inc.

BEU 039

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089023 Matrix: Solid Date Prep: 05.14.19
MB Sample Id: 7677847-1-BLK LCS Sample Id: 7677847-1-BKS LCSD Sample Id: 7677847-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	244	98	90-110	1	20	mg/kg	05.14.19 16:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089030 Matrix: Solid Date Prep: 05.14.19
MB Sample Id: 7677848-1-BLK LCS Sample Id: 7677848-1-BKS LCSD Sample Id: 7677848-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	255	102	90-110	0	20	mg/kg	05.14.19 18:24	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089023 Matrix: Soil Date Prep: 05.14.19
Parent Sample Id: 624132-001 MS Sample Id: 624132-001 S MSD Sample Id: 624132-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.3	251	277	103	275	103	90-110	1	20	mg/kg	05.14.19 16:29	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089023 Matrix: Soil Date Prep: 05.14.19
Parent Sample Id: 624177-001 MS Sample Id: 624177-001 S MSD Sample Id: 624177-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.93	252	357	141	350	138	90-110	2	20	mg/kg	05.14.19 18:14	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089030 Matrix: Soil Date Prep: 05.14.19
Parent Sample Id: 624165-003 MS Sample Id: 624165-003 S MSD Sample Id: 624165-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1560	250	2870	524	2840	512	90-110	1	20	mg/kg	05.14.19 18:46	X

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

QC Summary 624165

LT Environmental, Inc.

BEU 039

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089030 Matrix: Soil Date Prep: 05.14.19
Parent Sample Id: 624167-008 MS Sample Id: 624167-008 S MSD Sample Id: 624167-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2110	253	3100	391	3090	387	90-110	0	20	mg/kg	05.14.19 20:28	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089071 Matrix: Solid Date Prep: 05.14.19
MB Sample Id: 7677881-1-BLK LCS Sample Id: 7677881-1-BKS LCSD Sample Id: 7677881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1110	111	70-135	3	20	mg/kg	05.14.19 22:11	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1080	108	70-135	4	20	mg/kg	05.14.19 22:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		126		127		70-135	%	05.14.19 22:11
o-Terphenyl	103		106		115		70-135	%	05.14.19 22:11

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089071 Matrix: Soil Date Prep: 05.14.19
Parent Sample Id: 624024-001 MS Sample Id: 624024-001 S MSD Sample Id: 624024-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.6	999	1000	99	996	98	70-135	0	20	mg/kg	05.14.19 23:11	
Diesel Range Organics (DRO)	263	999	1150	89	1140	88	70-135	1	20	mg/kg	05.14.19 23:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		120		70-135	%	05.14.19 23:11
o-Terphenyl	105		97		70-135	%	05.14.19 23:11

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 624165

LT Environmental, Inc.

BEU 039

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

Seq Number: 3089051 Matrix: Solid Date Prep: 05.14.19

MB Sample Id: 7677859-1-BLK LCS Sample Id: 7677859-1-BKS LCSD Sample Id: 7677859-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.106	105	0.111	111	70-130	5	35	mg/kg	05.14.19 23:35	
Toluene	<0.000459	0.101	0.0988	98	0.103	103	70-130	4	35	mg/kg	05.14.19 23:35	
Ethylbenzene	<0.000569	0.101	0.105	104	0.109	109	70-130	4	35	mg/kg	05.14.19 23:35	
m,p-Xylenes	<0.00102	0.202	0.217	107	0.226	113	70-130	4	35	mg/kg	05.14.19 23:35	
o-Xylene	<0.000347	0.101	0.105	104	0.109	109	70-130	4	35	mg/kg	05.14.19 23:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		102		104		70-130	%	05.14.19 23:35
4-Bromofluorobenzene	84		99		102		70-130	%	05.14.19 23:35

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

Seq Number: 3089051 Matrix: Soil Date Prep: 05.14.19

Parent Sample Id: 623519-001 MS Sample Id: 623519-001 S MSD Sample Id: 623519-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00120	0.0998	0.105	104	0.110	108	70-130	5	35	mg/kg	05.14.19 12:13	
Toluene	0.00286	0.0998	0.0903	88	0.0992	95	70-130	9	35	mg/kg	05.14.19 12:13	
Ethylbenzene	0.00254	0.0998	0.0874	85	0.0989	95	70-130	12	35	mg/kg	05.14.19 12:13	
m,p-Xylenes	0.00644	0.200	0.178	86	0.203	98	70-130	13	35	mg/kg	05.14.19 12:13	
o-Xylene	0.00299	0.0998	0.0862	83	0.0984	94	70-130	13	35	mg/kg	05.14.19 12:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	05.14.19 12:13
4-Bromofluorobenzene	101		101		70-130	%	05.14.19 12:13

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: 624165

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

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
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:	Carlsbad, NM
Phone:	432.704.5178 Email:		aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	BEV 039
Project Number:	
P.O. Number:	2RP-5294
Sampler's Name:	Robert McAfee

Turn Around

Routine ☐
Rush: 24 hr
Due Date: 05/14/19

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.1/3.0	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS01	S	05/13/19	0940	4'	1	X	X	X	Composite
FS02			0950	4'		X	X	X	
SW01			0930	0-4'		X	X	X	
SW02			0955	0-4'		X	X	X	
SW03			1040	0-4'		X	X	X	

Work Order Notes

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5/13/19 11:40	2		5/14/19 1130
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

7757 0597844

Final 1.000

Page 20 of 22

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/14/2019 11:30:00 AM

Work Order #: 624165

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

Temperature Measuring device used : R8

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 05/14/2019

Checklist reviewed by: Jessica Kramer Date: 05/14/2019

Analytical Report 624776

for

LT Environmental, Inc.

Project Manager: Ashley Ager

BEU 039

20-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

20-MAY-19

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

Reference: XENCO Report No(s): **624776**
BEU 039
Project Address: ---

Ashley Ager:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624776. 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. 624776 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,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	05-17-19 12:10	5 ft	624776-001
FS04	S	05-17-19 12:15	5 ft	624776-002
SW04	S	05-17-19 12:40	0 - 5 ft	624776-003
SW05	S	05-17-19 12:35	0 - 5 ft	624776-004

Sample receipt non conformances and comments:

05/20/19: revised report to correct sample ID names per client request.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089496 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 624776-004.

Certificate of Analysis Summary 624776

LT Environmental, Inc., Arvada, CO

Project Name: BEU 039

Project Id: ---
Contact: Ashley Ager
Project Location: ---

Date Received in Lab: Sat May-18-19 08:00 am
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	624776-001		624776-002		624776-003		624776-004					
	Field Id:	FS03		FS04		SW04		SW05					
	Depth:	5- ft		5- ft		0-5 ft		0-5 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-17-19 12:10		May-17-19 12:15		May-17-19 12:40		May-17-19 12:35					
BTEX by EPA 8021B	***Extracted:***	May-19-19 20:15		May-19-19 20:15		May-19-19 20:15		May-19-19 20:15					
	Analyzed:	May-19-19 23:44		May-20-19 00:03		May-20-19 00:22		May-20-19 00:41					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00397	0.00397	<0.00402	0.00402				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	May-18-19 08:05		May-18-19 08:05		May-18-19 08:05		May-18-19 08:05					
	Analyzed:	May-18-19 15:13		May-18-19 15:18		May-18-19 15:23		May-18-19 15:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		265	25.0	422	25.1	238	4.99	483	4.96				
TPH by SW8015 Mod	***Extracted:***	May-18-19 08:00		May-18-19 08:00		May-18-19 08:00		May-18-19 08:00					
	Analyzed:	May-18-19 17:58		May-18-19 18:19		May-18-19 18:39		May-18-19 18:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-001	Date Collected:	05.17.19 12.10	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	05.18.19 08.05	Basis:	Wet Weight
Seq Number:	3089467				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**265**	25.0	mg/kg	05.18.19 15.13		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.18.19 08.00	Basis:	Wet Weight
Seq Number:	3089546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.18.19 17.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.18.19 17.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.18.19 17.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.18.19 17.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.18.19 17.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.18.19 17.58	
o-Terphenyl	84-15-1	109	%	70-135	05.18.19 17.58	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-001	Date Collected:	05.17.19 12.10	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.19.19 20.15	Basis:	Wet Weight
Seq Number:	3089496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.19.19 23.44	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.19.19 23.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.19.19 23.44	
4-Bromofluorobenzene	460-00-4	121	%	70-130	05.19.19 23.44	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-002	Date Collected:	05.17.19 12.15	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	05.18.19 08.05	Basis:	Wet Weight
Seq Number:	3089467				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**422**	25.1	mg/kg	05.18.19 15.18		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.18.19 08.00	Basis:	Wet Weight
Seq Number:	3089546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.18.19 18.19	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.18.19 18.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.18.19 18.19	
o-Terphenyl	84-15-1	103	%	70-135	05.18.19 18.19	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-002	Date Collected:	05.17.19 12.15	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.19.19 20.15	Basis:	Wet Weight
Seq Number:	3089496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.20.19 00.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.20.19 00.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	05.20.19 00.03	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.20.19 00.03	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-003	Date Collected:	05.17.19 12.40	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	05.18.19 08.05	Basis:	Wet Weight
Seq Number:	3089467				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	4.99	mg/kg	05.18.19 15.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.18.19 08.00	Basis:	Wet Weight
Seq Number:	3089546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.18.19 18.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.18.19 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	05.18.19 18.39	
o-Terphenyl	84-15-1	105	%	70-135	05.18.19 18.39	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-003	Date Collected:	05.17.19 12.40	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.19.19 20.15	Basis:	Wet Weight
Seq Number:	3089496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.20.19 00.22	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.20.19 00.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	05.20.19 00.22	
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.20.19 00.22	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-004	Date Collected:	05.17.19 12.35	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	05.18.19 08.05	Basis:	Wet Weight
Seq Number:	3089467				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**483**	4.96	mg/kg	05.18.19 15.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.18.19 08.00	Basis:	Wet Weight
Seq Number:	3089546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.18.19 18.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.18.19 18.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.18.19 18.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.18.19 18.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.18.19 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.18.19 18.59	
o-Terphenyl	84-15-1	105	%	70-135	05.18.19 18.59	

Certificate of Analytical Results 624776

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.18.19 08.00
Lab Sample Id:	624776-004	Date Collected:	05.17.19 12.35	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.19.19 20.15	Basis:	Wet Weight
Seq Number:	3089496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.20.19 00.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.20.19 00.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	131	%	70-130	05.20.19 00.41	**
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.20.19 00.41	

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 624776

LT Environmental, Inc.

BEU 039

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089467 Matrix: Solid Date Prep: 05.17.19
MB Sample Id: 7678113-1-BLK LCS Sample Id: 7678113-1-BKS LCSD Sample Id: 7678113-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	252	101	90-110	0	20	mg/kg	05.18.19 13:04	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089467 Matrix: Soil Date Prep: 05.17.19
Parent Sample Id: 624749-004 MS Sample Id: 624749-004 S MSD Sample Id: 624749-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.7	252	272	103	264	100	90-110	3	20	mg/kg	05.18.19 13:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089467 Matrix: Soil Date Prep: 05.17.19
Parent Sample Id: 624750-006 MS Sample Id: 624750-006 S MSD Sample Id: 624750-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	110	250	362	101	362	101	90-110	0	20	mg/kg	05.18.19 14:32	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089546 Matrix: Solid Date Prep: 05.18.19
MB Sample Id: 7678171-1-BLK LCS Sample Id: 7678171-1-BKS LCSD Sample Id: 7678171-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1070	107	1080	108	70-135	1	20	mg/kg	05.18.19 11:53	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1030	103	70-135	1	20	mg/kg	05.18.19 11:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		126		123		70-135	%	05.18.19 11:53
o-Terphenyl	109		112		110		70-135	%	05.18.19 11:53

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

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

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

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

QC Summary 624776

LT Environmental, Inc.

BEU 039

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089546 Matrix: Soil Date Prep: 05.18.19
Parent Sample Id: 624740-001 MS Sample Id: 624740-001 S MSD Sample Id: 624740-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1070	107	1070	107	70-135	0	20	mg/kg	05.18.19 12:54	
Diesel Range Organics (DRO)	16.7	999	1010	99	1010	100	70-135	0	20	mg/kg	05.18.19 12:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		129		70-135	%	05.18.19 12:54
o-Terphenyl	111		113		70-135	%	05.18.19 12:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3089496 Matrix: Solid Date Prep: 05.19.19
MB Sample Id: 7678141-1-BLK LCS Sample Id: 7678141-1-BKS LCSD Sample Id: 7678141-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0962	96	0.0971	98	70-130	1	35	mg/kg	05.19.19 21:52	
Toluene	<0.00201	0.100	0.0994	99	0.0998	100	70-130	0	35	mg/kg	05.19.19 21:52	
Ethylbenzene	<0.00201	0.100	0.109	109	0.110	111	70-130	1	35	mg/kg	05.19.19 21:52	
m,p-Xylenes	<0.00402	0.201	0.233	116	0.233	117	70-130	0	35	mg/kg	05.19.19 21:52	
o-Xylene	<0.00201	0.100	0.114	114	0.114	115	70-130	0	35	mg/kg	05.19.19 21:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		94		93		70-130	%	05.19.19 21:52
4-Bromofluorobenzene	107		110		111		70-130	%	05.19.19 21:52

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3089496 Matrix: Soil Date Prep: 05.19.19
Parent Sample Id: 624776-001 MS Sample Id: 624776-001 S MSD Sample Id: 624776-001 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	0.0848	85	0.0701	70	70-130	19	35	mg/kg	05.19.19 22:30	
Toluene	<0.00199	0.0996	0.0856	86	0.0710	71	70-130	19	35	mg/kg	05.19.19 22:30	
Ethylbenzene	<0.00199	0.0996	0.0926	93	0.0755	76	70-130	20	35	mg/kg	05.19.19 22:30	
m,p-Xylenes	<0.00398	0.199	0.196	98	0.160	80	70-130	20	35	mg/kg	05.19.19 22:30	
o-Xylene	<0.00199	0.0996	0.0960	96	0.0784	79	70-130	20	35	mg/kg	05.19.19 22:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		96		70-130	%	05.19.19 22:30
4-Bromofluorobenzene	112		113		70-130	%	05.19.19 22:30

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

Chain of Custody

Work Order No: 624776

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
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:	Carlsbad, NM
Phone:	432.704.5178 Email:		aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	BEV 039	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP - 5294	Rush: 24hr	
Sampler's Name:	Robert McAfee	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	05/17/19	1210	5'	1	X	X	X
FS02			1215	5'		X	X	X
SW01			1240	0-5'		X	X	X
SW02			1235	0-5'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert McAfee		5/18/19 8:00	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.001

Cole-Parmer CUSTODY SEAL

Person Collecting Sample Deborah Mathis Sample No. _____
(signature)

Date Collected 5/24/17 Time Collected _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/18/2019 08:00:00 AM

Work Order #: 624776

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)?	2.6
#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?	**Yes**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 05/18/2019

Checklist reviewed by: Jessica Kramer Date: 05/19/2019

Analytical Report 627211

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 39

2RP-5294

26-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

26-JUN-19

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

Reference: XENCO Report No(s): **627211**
BEU 39
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 627211. 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. 627211 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

Sample Cross Reference 627211

LT Environmental, Inc., Arvada, CO

BEU 39

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WS01	W	06-07-19 12:55	21 ft	627211-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 627211

LT Environmental, Inc., Arvada, CO

Project Name: BEU 39

Project Id: 2RP-5294
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Tue Jun-11-19 11:20 am
Report Date: 26-JUN-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	627211-001					
	Field Id:	WS01					
	Depth:	21 ft					
	Matrix:	WATER					
	Sampled:	Jun-07-19 12:55					
BTEX by EPA 8021B	***Extracted:***	Jun-12-19 10:30					
	Analyzed:	Jun-12-19 14:38					
	Units/RL:	mg/L	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jun-12-19 09:30					
	Analyzed:	Jun-12-19 18:22					
	Units/RL:	mg/L	RL				
Chloride		295	5.00				
TDS by SM2540C	***Extracted:***						
	Analyzed:	Jun-14-19 11:34					
	Units/RL:	mg/L	RL				
Total Dissolved Solids		2940	5.00				
TPH by SW8015 Mod SUB: T104704215-19-29	***Extracted:***	Jun-21-19 17:09					
	Analyzed:	Jun-26-19 02:24					
	Units/RL:	mg/L	RL				
Gasoline Range Hydrocarbons (GRO)		<1.28	1.28				
Diesel Range Organics (DRO)		<1.28	1.28				
Total TPH		<1.28	1.28				
Total GRO-DRO		<1.28	1.28				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 627211

LT Environmental, Inc., Arvada, CO

BEU 39

Sample Id: **WS01** Matrix: Water Date Received:06.11.19 11.20
Lab Sample Id: 627211-001 Date Collected: 06.07.19 12.55 Sample Depth: 21 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 06.12.19 09.30
Seq Number: 3092094

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**295**	5.00	mg/L	06.12.19 18.22		10

Analytical Method: TDS by SM2540C
Tech: SPC % Moisture:
Analyst: SPC
Seq Number: 3092539

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved Solids	1642222	**2940**	5.00	mg/L	06.14.19 11.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 06.21.19 17.09
Seq Number: 3093487 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<1.28	1.28	mg/L	06.26.19 02.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<1.28	1.28	mg/L	06.26.19 02.24	U	1
Total TPH	PHC635	<1.28	1.28	mg/L	06.26.19 02.24	U	1
Total GRO-DRO	PHC628	<1.28	1.28	mg/L	06.26.19 02.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.26.19 02.24	
o-Terphenyl	84-15-1	97	%	70-135	06.26.19 02.24	

Certificate of Analytical Results 627211

LT Environmental, Inc., Arvada, CO

BEU 39

Sample Id:	**WS01**	Matrix:	Water	Date Received:	06.11.19 11.20
Lab Sample Id:	627211-001	Date Collected:	06.07.19 12.55	Sample Depth:	21 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.12.19 10.30		
Seq Number:	3092188				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.12.19 14.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.12.19 14.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.12.19 14.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.12.19 14.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.12.19 14.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.12.19 14.38	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.12.19 14.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	06.12.19 14.38	
4-Bromofluorobenzene	460-00-4	82	%	70-130	06.12.19 14.38	

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 627211

LT Environmental, Inc.

BEU 39

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092094 Matrix: Water Date Prep: 06.12.19
MB Sample Id: 7679729-1-BLK LCS Sample Id: 7679729-1-BKS LCSD Sample Id: 7679729-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	23.8	95	23.7	95	90-110	0	20	mg/L	06.12.19 13:49	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092094 Matrix: Water Date Prep: 06.12.19
Parent Sample Id: 627241-001 MS Sample Id: 627241-001 S MSD Sample Id: 627241-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	24.8	99	24.2	97	90-110	2	20	mg/L	06.12.19 15:21	

Analytical Method: **TDS by SM2540C**
Seq Number: 3092539 Matrix: Water
MB Sample Id: 3092539-1-BLK LCS Sample Id: 3092539-1-BKS LCSD Sample Id: 3092539-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	13.0	1000	987	99	999	100	80-120	1	10	mg/L	06.14.19 11:34	

Analytical Method: **TDS by SM2540C**
Seq Number: 3092539 Matrix: Water
Parent Sample Id: 627211-001 MD Sample Id: 627211-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	2940	2870	2	10	mg/L	06.14.19 11:34	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093487 Matrix: Water Date Prep: 06.21.19
MB Sample Id: 7680497-1-BLK LCS Sample Id: 7680497-1-BKS LCSD Sample Id: 7680497-1-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)	<1.50	100	107	107	111	111	70-135	4	35	mg/L	06.25.19 15:45	
Diesel Range Organics (DRO)	<1.50	100	96.8	97	101	101	70-135	4	35	mg/L	06.25.19 15:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		93		95		70-135	%	06.25.19 15:45
o-Terphenyl	80		82		84		70-135	%	06.25.19 15:45

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

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

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

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

Final 1.000

QC Summary 627211

LT Environmental, Inc.

BEU 39

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

Seq Number: 3092188 Matrix: Water Date Prep: 06.12.19

MB Sample Id: 7679842-1-BLK LCS Sample Id: 7679842-1-BKS LCSD Sample Id: 7679842-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000408	0.100	0.0923	92	0.104	104	70-130	12	25	mg/L	06.12.19 22:25	
Toluene	<0.000367	0.100	0.0880	88	0.0999	100	70-130	13	25	mg/L	06.12.19 22:25	
Ethylbenzene	<0.000657	0.100	0.0957	96	0.109	109	70-130	13	25	mg/L	06.12.19 22:25	
m,p-Xylenes	<0.000630	0.200	0.199	100	0.225	113	70-130	12	25	mg/L	06.12.19 22:25	
o-Xylene	<0.000642	0.100	0.0975	98	0.110	110	70-130	12	25	mg/L	06.12.19 22:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		101		102		70-130	%	06.12.19 22:25
4-Bromofluorobenzene	72		90		90		70-130	%	06.12.19 22:25

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

Seq Number: 3092188 Matrix: Ground Water Date Prep: 06.12.19

Parent Sample Id: 626647-001 MS Sample Id: 626647-001 S MSD Sample Id: 626647-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.0921	0.100	0.190	98	0.205	113	70-130	8	25	mg/L	06.12.19 23:03	
Toluene	0.140	0.100	0.247	107	0.253	113	70-130	2	25	mg/L	06.12.19 23:03	
Ethylbenzene	0.0441	0.100	0.144	100	0.158	114	70-130	9	25	mg/L	06.12.19 23:03	
m,p-Xylenes	0.0355	0.200	0.227	96	0.262	113	70-130	14	25	mg/L	06.12.19 23:03	
o-Xylene	0.0241	0.100	0.121	97	0.135	111	70-130	11	25	mg/L	06.12.19 23:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	06.12.19 23:03
4-Bromofluorobenzene	92		93		70-130	%	06.12.19 23:03

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: 627211

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	BEU 39	Turn Around	
Project Number:	2RP-5294	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.4/0.4	Thermometer ID	We	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.5	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Total Dissolved Solids (TDS)	Work Order Notes
WS01	W	6/7/2019	12:55	21'	7	3	2	1	1	

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

Sample Comments

SOP 6/7/19

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/7/19 @ 15:40	2		6/11/19 1120
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 11 of 14

Inter-Office Shipment

IOS Number : 41217

Date/Time:	06.12.2019 08:35	Created by:	Jessica Kramer	Please send report to:	Jessica Kramer
Lab# From:	**Midland**	Delivery Priority:		Address:	1211 W. Florida Ave
Lab# To:	**Houston**	Air Bill No.:	775459045484	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
627211-001	W	WS01	06.07.2019 12:55	SW8015MOD_NM	TPH by SW8015 Mod	06.17.2019	06.21.2019	JKR	GRO-DRO PHCC10C28	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer

Jessica Kramer

Date Relinquished: 06.12.2019

Received By: Travis Simmons

Travis Simmons

Date Received: 06.13.2019 09:50

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 41217

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer **Date Sent:** 06.12.2019 08.35 AM

Received By: Travis Simmons **Date Received:** 06.13.2019 09.50 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Travis Simmons Date: 06.13.2019

Travis Simmons

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/11/2019 11:20:00 AM

Work Order #: 627211

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

Temperature Measuring device used : R8

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

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

Analyst: BT

PH Device/Lot#: A032690

Checklist completed by: Brianna Teel Date: 06/11/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/11/2019

Jessica Kramer

Analytical Report 638536

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 039

012919036

02-OCT-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 (2017-142), North Carolina (681)

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-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)

02-OCT-19

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

Reference: XENCO Report No(s): **638536**
BEU 039
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 638536. 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. 638536 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

Sample Cross Reference 638536

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	09-30-19 16:05	5 ft	638536-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3103024 BTEX by EPA 8021B

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

Certificate of Analysis Summary 638536

LT Environmental, Inc., Arvada, CO

Project Name: BEU 039

Project Id: 012919036
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Oct-01-19 08:30 am
Report Date: 02-OCT-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	638536-001					
	Field Id:	FS05					
	Depth:	5- ft					
	Matrix:	SOIL					
	Sampled:	Sep-30-19 16:05					
BTEX by EPA 8021B	***Extracted:***	Oct-01-19 09:30					
	Analyzed:	Oct-01-19 13:16					
	Units/RL:	mg/kg	RL				
Benzene		<0.00101	0.00101				
Toluene		<0.00101	0.00101				
Ethylbenzene		<0.00101	0.00101				
m,p-Xylenes		<0.00202	0.00202				
o-Xylene		<0.00101	0.00101				
Total Xylenes		<0.00101	0.00101				
Total BTEX		<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Oct-01-19 13:10					
	Analyzed:	Oct-01-19 16:32					
	Units/RL:	mg/kg	RL				
Chloride		179	49.4				
TPH by SW8015 Mod	***Extracted:***	Oct-01-19 10:30					
	Analyzed:	Oct-01-19 13:34					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				
Total GRO-DRO		<49.8	49.8				
Total TPH		<49.8	49.8				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 638536

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	10.01.19 08.30
Lab Sample Id:	638536-001	Date Collected:	09.30.19 16.05	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.01.19 13.10	Basis:	Wet Weight
Seq Number:	3103013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**179**	49.4	mg/kg	10.01.19 16.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.01.19 10.30	Basis:	Wet Weight
Seq Number:	3103011				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.01.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.01.19 13.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.01.19 13.34	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.01.19 13.34	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.01.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	10.01.19 13.34	
o-Terphenyl	84-15-1	93	%	70-135	10.01.19 13.34	

Certificate of Analytical Results 638536

LT Environmental, Inc., Arvada, CO

BEU 039

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	10.01.19 08.30
Lab Sample Id:	638536-001	Date Collected:	09.30.19 16.05	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.01.19 09.30	Basis:	Wet Weight
Seq Number:	3103024				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	10.01.19 13.16	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1
Total BTEX		<0.00101	0.00101	mg/kg	10.01.19 13.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.01.19 13.16	
4-Bromofluorobenzene	460-00-4	96	%	70-130	10.01.19 13.16	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 638536

LT Environmental, Inc.

BEU 039

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3103013 Matrix: Solid Date Prep: 10.01.19
MB Sample Id: 7687223-1-BLK LCS Sample Id: 7687223-1-BKS LCSD Sample Id: 7687223-1-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	263	105	90-110	1	20	mg/kg	10.01.19 13:51	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3103013 Matrix: Soil Date Prep: 10.01.19
Parent Sample Id: 638538-001 MS Sample Id: 638538-001 S MSD Sample Id: 638538-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3550	4030	8400	120	8390	120	90-110	0	20	mg/kg	10.01.19 14:11	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3103013 Matrix: Soil Date Prep: 10.01.19
Parent Sample Id: 638538-011 MS Sample Id: 638538-011 S MSD Sample Id: 638538-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	44.8	201	260	107	260	107	90-110	0	20	mg/kg	10.01.19 15:48	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3103011 Matrix: Solid Date Prep: 10.01.19
MB Sample Id: 7687240-1-BLK LCS Sample Id: 7687240-1-BKS LCSD Sample Id: 7687240-1-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	1010	101	1040	104	70-135	3	35	mg/kg	10.01.19 11:51	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1100	110	70-135	2	35	mg/kg	10.01.19 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		115		124		70-135	%	10.01.19 11:51
o-Terphenyl	104		112		115		70-135	%	10.01.19 11:51

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 638536

LT Environmental, Inc.

BEU 039

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3103011 Matrix: Soil Date Prep: 10.01.19
Parent Sample Id: 638538-001 MS Sample Id: 638538-001 S MSD Sample Id: 638538-001 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)	<49.9	997	1090	109	1230	123	70-135	12	35	mg/kg	10.01.19 12:53	
Diesel Range Organics (DRO)	<49.9	997	1120	112	1340	134	70-135	18	35	mg/kg	10.01.19 12:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		134		70-135	%	10.01.19 12:53
o-Terphenyl	117		129		70-135	%	10.01.19 12:53

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3103024 Matrix: Solid Date Prep: 10.01.19
MB Sample Id: 7687281-1-BLK LCS Sample Id: 7687281-1-BKS LCSD Sample Id: 7687281-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0967	97	0.0957	96	70-130	1	35	mg/kg	10.01.19 10:58	
Toluene	<0.00100	0.100	0.111	111	0.109	109	70-130	2	35	mg/kg	10.01.19 10:58	
Ethylbenzene	<0.00100	0.100	0.118	118	0.119	119	71-129	1	35	mg/kg	10.01.19 10:58	
m,p-Xylenes	<0.00200	0.200	0.242	121	0.242	121	70-135	0	35	mg/kg	10.01.19 10:58	
o-Xylene	<0.00100	0.100	0.115	115	0.116	116	71-133	1	35	mg/kg	10.01.19 10:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		103		70-130	%	10.01.19 10:58
4-Bromofluorobenzene	97		111		110		70-130	%	10.01.19 10:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3103024 Matrix: Soil Date Prep: 10.01.19
Parent Sample Id: 638538-001 MS Sample Id: 638538-001 S MSD Sample Id: 638538-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0918	92	0.0932	94	70-130	2	35	mg/kg	10.01.19 12:17	
Toluene	<0.000998	0.0998	0.105	105	0.104	104	70-130	1	35	mg/kg	10.01.19 12:17	
Ethylbenzene	<0.000998	0.0998	0.113	113	0.111	111	71-129	2	35	mg/kg	10.01.19 12:17	
m,p-Xylenes	<0.00200	0.200	0.230	115	0.227	114	70-135	1	35	mg/kg	10.01.19 12:17	
o-Xylene	<0.000998	0.0998	0.111	111	0.110	110	71-133	1	35	mg/kg	10.01.19 12:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	10.01.19 12:17
4-Bromofluorobenzene	113		108		70-130	%	10.01.19 12:17

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: 638536

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
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:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	BEU 039	Turn Around	
Project Number:	012919036	Routine ☐	
P.O. Number:	2RP-5294	Rush: 24hr	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	4.0	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS05	S	09/30/19	1605	5'	1	x	x	x	composite

Work Order Notes

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert McAfee	Courtney	10/1/19 08:30	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/01/2019 08:30:00 AM

Work Order #: 638536

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4
#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: 10/01/2019

Checklist reviewed by: Jessica Kramer Date: 10/01/2019

Eastern view of release area south of the tank battery during excavation activities.

Project: 012919036	XTO Energy, Inc. Big Eddy Unit 039	LTE Advancing Opportunity
May 13, 2019	Photographic Log	

Eastern view of the excavation extent on the south side of the tank battery during excavation activities.

Project: 012919036	XTO Energy, Inc. Big Eddy Unit 039	LTE Advancing Opportunity
May 17, 2019	Photographic Log	