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

May 22, 2019

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

RE: Closure Request
Big Eddy Unit DI2 323H
Remediation Permit Number 2RP-5295
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing the excavation of impacted soil and soil sampling activities at the Big Eddy Unit DI2 323H (Site) in Unit A, Section 34, Township 19 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The initial Form C-141 misidentified the Site unit letter as B. The purpose of the soil sampling and excavation activities was to address impacts to soil after a produced water release at the Site.

On February 21, 2019, a transfer hose with a missing gasket released 5 barrels (bbls) of produced water into a temporary lined containment. A contract crew arrived at the Site to remove equipment from within the containment and removed a containment wall. Some of the fluid released from the containment onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover the free-standing fluid from the containment; approximately 3 bbls of fluid were recovered. The temporary containment was removed. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on March 7, 2019, and was assigned Remediation Permit (RP) Number 2RP-5295 (Attachment 1). Based on the excavation activities and results of the soil sampling events, XTO is submitting this closure report and requesting no further action for this release event.

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is CP 00722, located approximately 1.33 miles west of the Site, with a depth to groundwater of 140 feet bgs and a total depth of 220 feet bgs. The water well is 12 feet lower in elevation than the Site. The nearest continuously flowing water or significant watercourse to the Site is an unnamed dry wash

located approximately 0.99 miles southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is in a low potential karst area. Based on these criteria, the following NMOCD Table 1 closure criteria were applied: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

PRELIMINARY SOIL SAMPLING ACTIVITIES

On March 18, 2019, LTE personnel inspected the Site to evaluate the release extent. Surface staining was observed in the release area on the well pad. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected four preliminary soil samples (SS01 through SS04) within the release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1 and the laboratory analytical report is included in Attachment 2. Based on the laboratory analytical results and visible staining, potholing was scheduled to delineate the vertical extent of impacted soil.

DELINEATION SOIL SAMPLING ACTIVITIES

On April 8, 2019, LTE personnel returned to the Site to oversee potholing activities to delineate the vertical extent of impacted soil. Potholes were advanced via backhoe to a depth of 4 feet bgs at the four preliminary soil sample locations (SS01 through SS04). Soil was field screened in each pothole using a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected from each pothole SS01 through SS04 for laboratory analysis. Delineation soil samples SS01A through SS04A were collected from depths of 1 foot or 2 feet bgs. Delineation soil samples SS01B through SS04B were collected from a depth of 4 feet bgs. The delineation soil samples were collected, handled and analyzed as described above and submitted to Xenco in Midland,

Texas. The delineation soil sample locations and depths are presented on Figure 2 and soil sample logs are included as Attachment 3.

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in delineation soil samples SS01A through SS04A and SS01B through SS04B. Laboratory analytical results indicated that the chloride concentration exceeded 600 mg/kg in delineation soil sample SS01A, collected at 1 foot bgs. Based on the laboratory analytical results and BLM preference that all soil in the top four feet of the subsurface contain less than 600 mg/kg, excavation of impacted soil was warranted. Laboratory analytical results are presented on Figure 2 and summarized in Table 1 and the laboratory analytical report is included in Attachment 2.

EXCAVATION ACTIVITIES

On April 29, 2019, LTE personnel were at the Site to oversee excavation activities as indicated by laboratory analytical results and the documented release area. To delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated from the release area to a depth of 2 feet bgs in the southeast portion of the excavation, and to a depth of 4 feet bgs in the rest of the excavation. Due to the presence of a drilling rig anchor in the release area, excavation activities were completed around the anchor. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls of the excavation. The 5-point composite soil samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation from depths of 0 to 2 feet bgs or 0 to 4 feet bgs. Sidewall sample SW05 was a 5-point excavation sidewall composite sample of the soil remaining in place surrounding the drilling rig anchor. Composite soil samples FS01 through FS03 were collected from the floor of the excavation from depths of 2 feet or 4 feet bgs. The excavation soil sample locations and depths are presented on Figure 3. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas.

The excavation measured approximately 3,000 square feet in area with a depth ranging from 2 feet to 4 feet bgs. The horizontal extent of the excavation is illustrated on Figure 3. Approximately 400 cubic yards of impacted soil were removed from the excavation via backhoe. The impacted soil will be transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH, GRO/DRO, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS04 and delineation soil samples SS01A through SS04A and SS01B through SS04B. Laboratory

analytical results indicated that chloride concentrations exceeded the BLM preferred chloride concentration of 600 mg/kg in delineation soil sample SS01A. Impacted soil was excavated to the extent possible. Laboratory analytical results indicated that BTEX, TPH, GRO/DRO, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all excavation confirmation soil samples. All excavation confirmation soil samples contained less than 600 mg/kg chloride except sidewall sample SW05, which had a chloride concentration of 851 mg/kg.

Further excavation of impacted soil in the area of sidewall sample SW05, collected from the interior sidewall of the final excavation extent, was limited by the presence of an anchor used for drilling operations. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site drilling operations equipment. This safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the drilling rig. This policy had to be enforced along the sidewall of the excavation where impacted soil was identified within 2 feet of the anchor. Laboratory analytical results are presented on Figure 2 and Figure 3 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

A total of 400 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of drilling operations equipment. Laboratory analytical results for excavation sidewall sample SW05 indicated that soil exceeding the BLM preferred closure criteria of 600 mg/kg in the top four feet of soil was left in place within 2 feet of a drilling rig anchor. The excavation was advanced to within 2 feet from the anchor to remove as much impacted soil as possible.

An estimated 7 cubic yards of soil with chloride concentrations exceeding 600 mg/kg was left in place in the area around sidewall sample SW05, assuming a maximum 4-foot depth based on laboratory analytical results for soil samples FS01 through FS03 and SS01B through SS04B, that contained chloride concentrations below 600 mg/kg at 4 feet bgs.

Laboratory analytical results indicated that BTEX, TPH, GRO/DRO, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all preliminary soil samples, delineation soil samples, and excavation soil samples. Approximately 7 cubic yards of soil with chloride concentrations slightly above the BLM preferred chloride concentration of 600 mg/kg was left in-place surrounding the drilling rig anchor. LTE and XTO do not believe that the 7 cubic yards of soil remaining in place with a chloride concentration of 851 mg/kg will result in imminent risk to human health, the environment, or groundwater. No saturated soil remains in place. The impacted soil remaining in place is limited to the area surrounding the anchor and is delineated vertically and laterally by delineation soil samples collected from potholes SS01 through SS04 and excavation soil samples SW01 through SW04, and FS01 through FS03.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release number 2RP-5295. 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. A photographic log of the Site is included as Attachment 4.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Ashley L. Ager

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, BLM
Crystal Weaver, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary and Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5295)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sample Logs
Attachment 4	Photographic Log

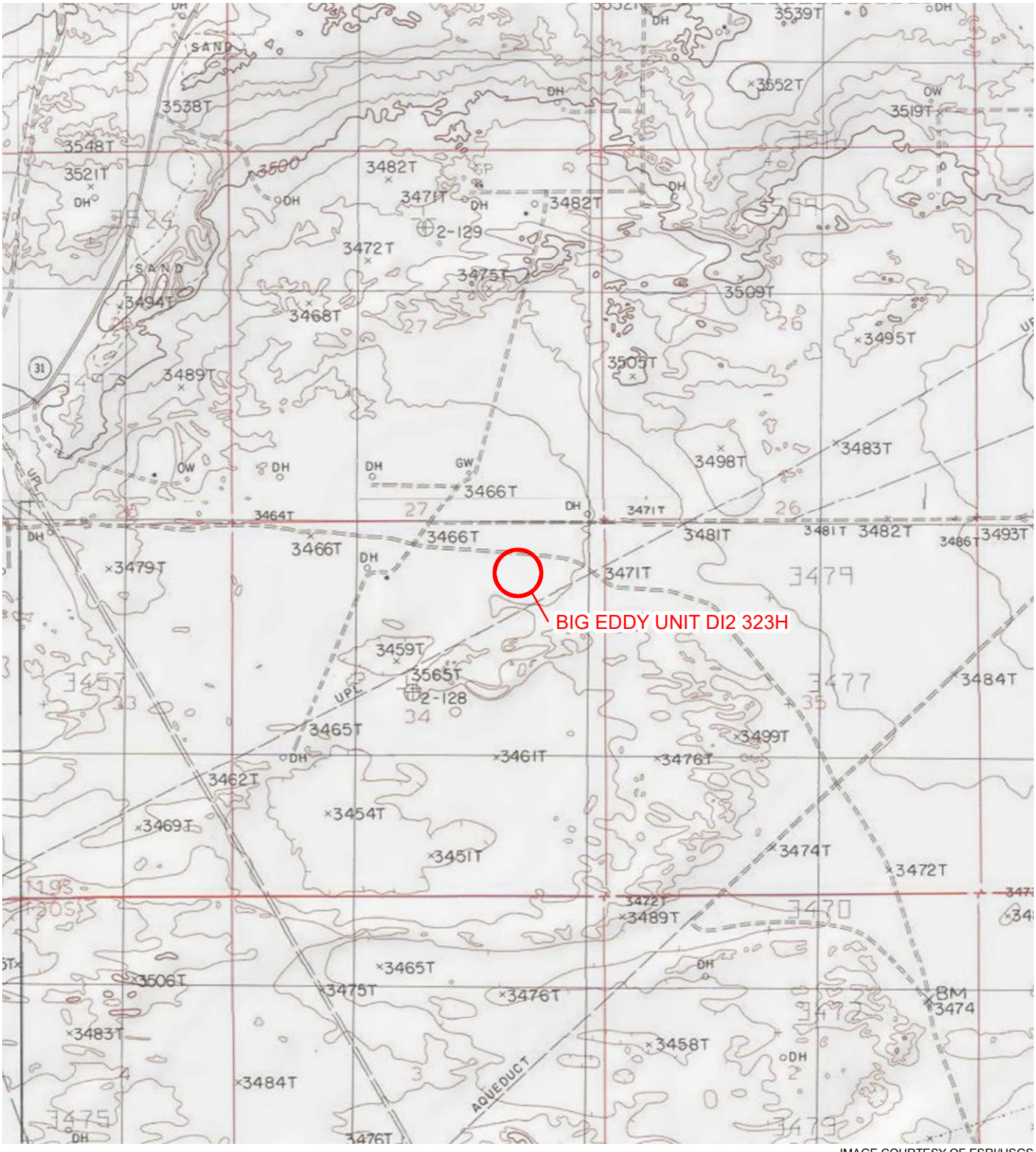

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5295

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT DI2 323H
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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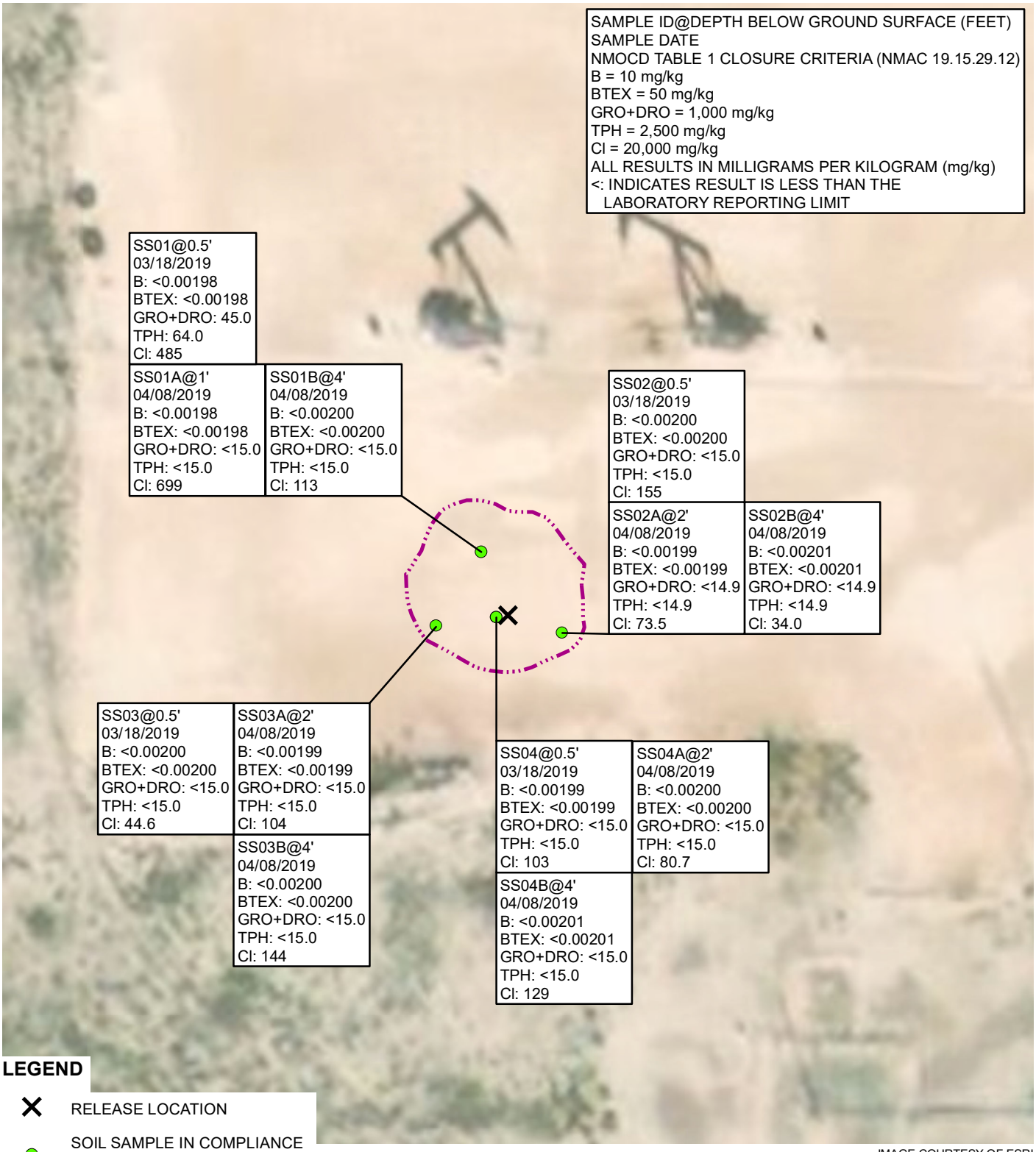

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5295

FIGURE 2
PRELIMINARY AND DELINEATION
SOIL SAMPLE LOCATIONS
BIG EDDY UNIT DI2 323H
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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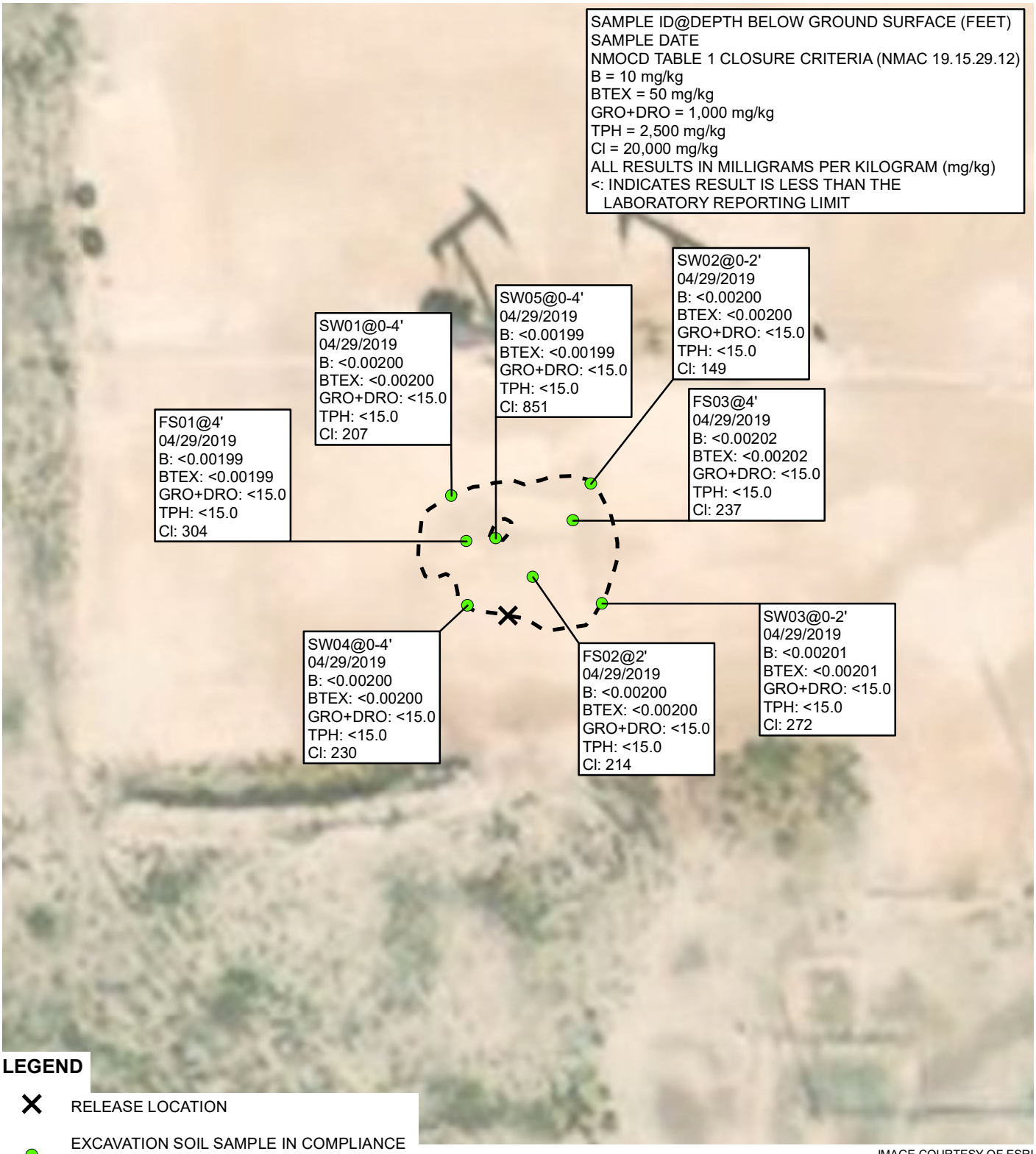


LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- EXCAVATION EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5295

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT DI2 323H
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919038_BIG EDDY UNIT DI2 323H_5295\012919038_FIG03_EXCAVATION_2019_5295.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT D12 323H
REMEDIATION PERMIT NUMBER 2RP-5295
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	03/18/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	45.0	19.0	45.0	64.0	485
SS02	0.5	03/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	155
SS03	0.5	03/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	44.6
SS04	0.5	03/18/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	103
SS01A	1	04/08/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	699
SS01B	4	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	113
SS02A	2	04/08/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	73.5
SS02B	4	04/08/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	34.0
SS03A	2	04/08/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	104
SS03B	4	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	144
SS04A	2	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	80.7
SS04B	4	04/08/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	129
SW01	0 - 4	04/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	207
SW02	0 - 2	04/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	149
SW03	0 - 2	04/29/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	272
SW04	0 - 4	04/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	230
SW05	0 - 4	04/29/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	851
FS01	4	04/29/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	304
FS02	2	04/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	214
FS03	4	04/29/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	237
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

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

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	NAB1907140526
District RP	2RP-5295
Facility ID	
Application ID	pAB1907140302

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)* NAB1907140526
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.622098° Longitude -103.852561°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit DI2 323H	Site Type Production Well Facility
Date Release Discovered 2/21/2019	API# *(if applicable)* 30-015-43648

Unit Letter	Section	Township	Range	County
~~B~~ A	34	19S	31E	Eddy

The initial C-141 form incorrectly identified this release as located in Unit B. It is located in Unit A.

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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 3
	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 temporary lined containment held fluid released from a transfer hose with a missing gasket. A contract crew arrived to retrieve equipment from within the containment and removed a containment wall without notifying the foreman. Some fluid from the containment was released to the well pad. A vacuum truck recovered standing fluid from the containment. The temporary containment was removed and an environmental contractor was retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907140526
District RP	2
Facility ID	
Application ID	pAB1907140302

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: _____

Location:	BEU DI2 323H (30-015-43648)	
Spill Date:	2/21/2019	

Length of Spill=	55.00	feet
Width of Spill=	40.00	feet
Saturation (or depth) of Spill=	2.00	inches
Approximate Oil %	-	
Porosity Factor=	0.03	
Volume Recovered=	3.00	bbls

VOLUME OF LEAK		
Total Oil=	-	barrels
Total Produced Water=	5.0	barrels

VOLUME RECOVERED

Total Oil=	-	barrels
Total Produced Water=	3.0	barrels

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907140526
District RP	2RP-5295
Facility ID	
Application ID	pAB1907140302

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907140526
District RP	2RP-5295
Facility ID	
Application ID	pAB1907140302

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: _____5/22/2019_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907140526
District RP	2RP-5295
Facility ID	
Application ID	pAB1907140302

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

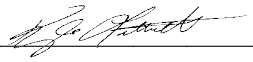
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ 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: 5/22/2019

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: LABORATORY ANALYTICAL REPORTS

Analytical Report 618271

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU DI2 323H

28-MAR-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)

28-MAR-19

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

Reference: XENCO Report No(s): **618271**
BEU DI2 323H
Project Address: Delaware Basin

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) 618271. 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. 618271 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-18-19 11:35	0.5 ft	618271-001
SS02	S	03-18-19 11:40	0.5 ft	618271-002
SS03	S	03-18-19 11:50	0.5 ft	618271-003
SS04	S	03-18-19 12:00	0.5 ft	618271-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083412 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3083505 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618271

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI2 323H

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Mar-20-19 01:15 pm
Report Date: 28-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	618271-001		618271-002		618271-003		618271-004					
	Field Id:	SS01		SS02		SS03		SS04					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-18-19 11:35		Mar-18-19 11:40		Mar-18-19 11:50		Mar-18-19 12:00					
BTEX by EPA 8021B	***Extracted:***	Mar-25-19 16:30		Mar-25-19 16:30		Mar-26-19 10:00		Mar-26-19 10:00					
	Analyzed:	Mar-26-19 06:46		Mar-26-19 07:05		Mar-26-19 15:44		Mar-26-19 16:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00397	0.00397	<0.00401	0.00401	<0.00400	0.00400	<0.00398	0.00398				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35					
	Analyzed:	Mar-21-19 18:13		Mar-21-19 18:23		Mar-21-19 18:33		Mar-21-19 18:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		485	4.96	155	4.97	44.6	5.01	103	4.96				
TPH by SW8015 Mod	***Extracted:***	Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00					
	Analyzed:	Mar-25-19 15:03		Mar-25-19 15:22		Mar-25-19 15:41		Mar-25-19 16:00					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		45.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		19.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		64.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Kelsey Brooks
Project Manager

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-001	Date Collected:	03.18.19 11.35	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**485**	4.96	mg/kg	03.21.19 18.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 15.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**45.0**	15.0	mg/kg	03.25.19 15.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**19.0**	15.0	mg/kg	03.25.19 15.03		1
Total TPH	PHC635	**64.0**	15.0	mg/kg	03.25.19 15.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.25.19 15.03	
o-Terphenyl	84-15-1	102	%	70-135	03.25.19 15.03	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-001	Date Collected:	03.18.19 11.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.26.19 06.46	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.26.19 06.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.26.19 06.46	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.26.19 06.46	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-002	Date Collected:	03.18.19 11.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	4.97	mg/kg	03.21.19 18.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 15.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.25.19 15.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 15.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.25.19 15.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.25.19 15.22	
o-Terphenyl	84-15-1	101	%	70-135	03.25.19 15.22	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-002	Date Collected:	03.18.19 11.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.26.19 07.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.26.19 07.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.26.19 07.05	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.26.19 07.05	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-003	Date Collected:	03.18.19 11.50	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.6**	5.01	mg/kg	03.21.19 18.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 15.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.25.19 15.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 15.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.25.19 15.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.25.19 15.41	
o-Terphenyl	84-15-1	102	%	70-135	03.25.19 15.41	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-003	Date Collected:	03.18.19 11.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.26.19 10.00	Basis:	Wet Weight
Seq Number:	3083505				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.26.19 15.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.26.19 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.26.19 15.44	
4-Bromofluorobenzene	460-00-4	123	%	70-130	03.26.19 15.44	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-004	Date Collected:	03.18.19 12.00	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**103**	4.96	mg/kg	03.21.19 18.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 16.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.25.19 16.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.25.19 16.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.25.19 16.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.25.19 16.00	
o-Terphenyl	84-15-1	110	%	70-135	03.25.19 16.00	

Certificate of Analytical Results 618271

LT Environmental, Inc., Arvada, CO

BEU DI2 323H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618271-004	Date Collected:	03.18.19 12.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.26.19 10.00	Basis:	Wet Weight
Seq Number:	3083505				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.26.19 16.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.26.19 16.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.26.19 16.03	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.26.19 16.03	

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 618271

LT Environmental, Inc.

BEU DI2 323H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Solid Date Prep: 03.21.19
MB Sample Id: 7673994-1-BLK LCS Sample Id: 7673994-1-BKS LCSD Sample Id: 7673994-1-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	272	109	271	108	90-110	0	20	mg/kg	03.21.19 14:28	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-044 MS Sample Id: 618191-044 S MSD Sample Id: 618191-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.1	249	297	107	292	105	90-110	2	20	mg/kg	03.21.19 14:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-045 MS Sample Id: 618191-045 S MSD Sample Id: 618191-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	250	368	106	366	106	90-110	1	20	mg/kg	03.21.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674329-1-BLK LCS Sample Id: 7674329-1-BKS LCSD Sample Id: 7674329-1-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	1050	105	1050	105	70-135	0	20	mg/kg	03.25.19 11:38	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	1080	108	70-135	6	20	mg/kg	03.25.19 11:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		129		128		70-135	%	03.25.19 11:38
o-Terphenyl	107		113		120		70-135	%	03.25.19 11:38

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 618271

LT Environmental, Inc.

BEU DI2 323H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Soil Date Prep: 03.25.19
Parent Sample Id: 618604-005 MS Sample Id: 618604-005 S MSD Sample Id: 618604-005 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	1040	104	1050	105	70-135	1	20	mg/kg	03.25.19 20:28	
Diesel Range Organics (DRO)	22.5	998	1030	101	1040	102	70-135	1	20	mg/kg	03.25.19 20:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		119		70-135	%	03.25.19 20:28
o-Terphenyl	103		101		70-135	%	03.25.19 20:28

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083412 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674330-1-BLK LCS Sample Id: 7674330-1-BKS LCSD Sample Id: 7674330-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.107	107	0.111	111	70-130	4	35	mg/kg	03.26.19 00:11	
Toluene	<0.000454	0.0996	0.103	103	0.107	107	70-130	4	35	mg/kg	03.26.19 00:11	
Ethylbenzene	<0.000563	0.0996	0.110	110	0.113	113	70-130	3	35	mg/kg	03.26.19 00:11	
m,p-Xylenes	<0.00101	0.199	0.213	107	0.219	110	70-130	3	35	mg/kg	03.26.19 00:11	
o-Xylene	<0.000343	0.0996	0.110	110	0.115	115	70-130	4	35	mg/kg	03.26.19 00:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		102		104		70-130	%	03.26.19 00:11
4-Bromofluorobenzene	102		110		120		70-130	%	03.26.19 00:11

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083505 Matrix: Solid Date Prep: 03.26.19
MB Sample Id: 7674406-1-BLK LCS Sample Id: 7674406-1-BKS LCSD Sample Id: 7674406-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.111	112	0.116	115	70-130	4	35	mg/kg	03.26.19 13:52	
Toluene	<0.000453	0.0994	0.110	111	0.115	114	70-130	4	35	mg/kg	03.26.19 13:52	
Ethylbenzene	<0.000561	0.0994	0.118	119	0.123	122	70-130	4	35	mg/kg	03.26.19 13:52	
m,p-Xylenes	<0.00101	0.199	0.232	117	0.241	119	70-130	4	35	mg/kg	03.26.19 13:52	
o-Xylene	<0.000342	0.0994	0.119	120	0.123	122	70-130	3	35	mg/kg	03.26.19 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		103		102		70-130	%	03.26.19 13:52
4-Bromofluorobenzene	105		120		116		70-130	%	03.26.19 13:52

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

QC Summary 618271

LT Environmental, Inc.

BEU DI2 323H

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

Seq Number: 3083412 Matrix: Soil Date Prep: 03.25.19

Parent Sample Id: 618793-001 MS Sample Id: 618793-001 S MSD Sample Id: 618793-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.103	104	0.106	106	70-130	3	35	mg/kg	03.26.19 00:49	
Toluene	<0.000453	0.0994	0.0988	99	0.103	103	70-130	4	35	mg/kg	03.26.19 00:49	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.107	107	70-130	3	35	mg/kg	03.26.19 00:49	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.208	103	70-130	3	35	mg/kg	03.26.19 00:49	
o-Xylene	<0.000342	0.0994	0.105	106	0.112	112	70-130	6	35	mg/kg	03.26.19 00:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	03.26.19 00:49
4-Bromofluorobenzene	119		123		70-130	%	03.26.19 00:49

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

Seq Number: 3083505 Matrix: Soil Date Prep: 03.26.19

Parent Sample Id: 618271-003 MS Sample Id: 618271-003 S MSD Sample Id: 618271-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.104	104	0.100	99	70-130	4	35	mg/kg	03.26.19 14:30	
Toluene	<0.000455	0.0998	0.102	102	0.0972	96	70-130	5	35	mg/kg	03.26.19 14:30	
Ethylbenzene	<0.000564	0.0998	0.109	109	0.103	102	70-130	6	35	mg/kg	03.26.19 14:30	
m,p-Xylenes	<0.00101	0.200	0.214	107	0.202	100	70-130	6	35	mg/kg	03.26.19 14:30	
o-Xylene	<0.000344	0.0998	0.110	110	0.104	103	70-130	6	35	mg/kg	03.26.19 14:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	03.26.19 14:30
4-Bromofluorobenzene	120		120		70-130	%	03.26.19 14:30

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

XENCO LABORATORIES

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

Work Order No: 268271

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:	

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:	BEV DI 2 323H	Turn Around	
Project Number:		Routine ☑	
P.O. Number:	Spill date: 02/21/19	Rush:	
Sampler's Name:	Robert M.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.1/2.0	Thermometer ID	
Received Intact:	(Yes) No		R8
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 8021)	Chloride (EPA 300.0)
SS01	S	03/18/19	1135	0.5	1	X	X	X
SS02			1140		2	X	X	X
SS03			1150		2	X	X	X
SS04			1200		2	X	X	X

Work Order Notes

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

Sample Comments

Discrete
32.622098
-103.852561

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 Medley	Cruz Rubio	03/18/19 17:20	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 4521 7224

Final 1.000

Page 18 of 20

ORIGIN ID:CAOA (575) 887-6245
XENCO
PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 19MAR19
ACTWGT: 38.00 LB
CAD: 101813706/INET4100
DIMS: 18x12x15 IN
BILL RECIPIENT

TO HOLD FOR XENCO
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S
MIDLAND TX 79711
(806) 794-1296
INV:
PO:
REF:
DEPT:

565J1/46D3/23AD

J191019010701uv

WED - 20 MAR HOLD
STANDARD OVERNIGHT
HLD
MAFA
LBB
TX-US

TRK# 0201 7747 4521 7224

41 MAFA

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/20/2019 01:15:00 PM

Work Order #: 618271

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 03/20/2019

Checklist reviewed by: Mike Kimmel Date: 03/21/2019

Analytical Report 620611

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU DI 2 323H

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): **620611**
BEU DI 2 323H
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) 620611. 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. 620611 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 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	04-08-19 10:58	1 ft	620611-001
SS01B	S	04-08-19 11:06	4 ft	620611-002
SS02A	S	04-08-19 10:20	2 ft	620611-003
SS02B	S	04-08-19 10:30	4 ft	620611-004
SS03A	S	04-08-19 10:50	2 ft	620611-005
SS03B	S	04-08-19 10:56	4 ft	620611-006
SS04A	S	04-08-19 10:38	2 ft	620611-007
SS04B	S	04-08-19 10:44	4 ft	620611-008

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085496 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: 620611-006,620611-002.

Certificate of Analysis Summary 620611

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI 2 323H

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

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 15-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	620611-001		620611-002		620611-003		620611-004		620611-005		620611-006	
	Field Id:	SS01A		SS01B		SS02A		SS02B		SS03A		SS03B	
	Depth:	1- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-08-19 10:58		Apr-08-19 11:06		Apr-08-19 10:20		Apr-08-19 10:30		Apr-08-19 10:50		Apr-08-19 10:56	
BTEX by EPA 8021B	***Extracted:***	Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00	
	Analyzed:	Apr-11-19 19:23		Apr-11-19 19:42		Apr-11-19 20:01		Apr-11-19 21:15		Apr-11-19 21:34		Apr-11-19 21:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00397	0.00397	<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Apr-10-19 16:00		Apr-10-19 16:00		Apr-10-19 16:00		Apr-10-19 16:00		Apr-10-19 16:00		Apr-10-19 16:00	
	Analyzed:	Apr-12-19 14:53		Apr-12-19 14:59		Apr-12-19 15:06		Apr-12-19 15:27		Apr-12-19 15:34		Apr-12-19 15:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		699	4.99	113	4.97	73.5	4.99	34.0	4.95	104	5.01	144	5.00
TPH by SW8015 Mod	***Extracted:***	Apr-11-19 16:00		Apr-11-19 16:00		Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00		Apr-11-19 10:00	
	Analyzed:	Apr-11-19 21:09		Apr-11-19 22:05		Apr-11-19 18:00		Apr-11-19 18:19		Apr-11-19 18:38		Apr-11-19 18:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 620611

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI 2 323H

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

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 15-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	620611-007		620611-008					
	Field Id:	SS04A		SS04B					
	Depth:	2- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-08-19 10:38		Apr-08-19 10:44					
BTEX by EPA 8021B	***Extracted:***	Apr-11-19 10:00		Apr-11-19 10:00					
	Analyzed:	Apr-11-19 22:12		Apr-11-19 22:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201				
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	Apr-10-19 16:00		Apr-10-19 16:00					
	Analyzed:	Apr-12-19 15:47		Apr-12-19 15:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		80.7	4.98	129	4.96				
TPH by SW8015 Mod	***Extracted:***	Apr-11-19 10:00		Apr-11-19 10:00					
	Analyzed:	Apr-11-19 19:16		Apr-11-19 19:35					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-001	Date Collected:	04.08.19 10.58	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**699**	4.99	mg/kg	04.12.19 14.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 16.00	Basis:	Wet Weight
Seq Number:	3085437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 21.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 21.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 21.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 21.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 21.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 21.09	
o-Terphenyl	84-15-1	101	%	70-135	04.11.19 21.09	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-001	Date Collected:	04.08.19 10.58	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.11.19 19.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.11.19 19.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.11.19 19.23	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 19.23	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id: **SS01B** Matrix: Soil Date Received:04.10.19 11.54
Lab Sample Id: 620611-002 Date Collected: 04.08.19 11.06 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 04.10.19 16.00 Basis: Wet Weight
Seq Number: 3085609

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**113**	4.97	mg/kg	04.12.19 14.59		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 04.11.19 16.00 Basis: Wet Weight
Seq Number: 3085437

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 22.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 22.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 22.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 22.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 22.05	
o-Terphenyl	84-15-1	101	%	70-135	04.11.19 22.05	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS01B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-002	Date Collected:	04.08.19 11.06	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.11.19 19.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.11.19 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.11.19 19.42	
4-Bromofluorobenzene	460-00-4	141	%	70-130	04.11.19 19.42	**

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-003	Date Collected:	04.08.19 10.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.5**	4.99	mg/kg	04.12.19 15.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.11.19 18.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.11.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.11.19 18.00	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.11.19 18.00	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.11.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 18.00	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 18.00	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-003	Date Collected:	04.08.19 10.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.11.19 20.01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.11.19 20.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 20.01	
4-Bromofluorobenzene	460-00-4	121	%	70-130	04.11.19 20.01	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS02B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-004	Date Collected:	04.08.19 10.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.0**	4.95	mg/kg	04.12.19 15.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.11.19 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.11.19 18.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.11.19 18.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.11.19 18.19	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.11.19 18.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 18.19	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 18.19	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS02B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-004	Date Collected:	04.08.19 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.11.19 21.15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.11.19 21.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.11.19 21.15	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 21.15	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-005	Date Collected:	04.08.19 10.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**104**	5.01	mg/kg	04.12.19 15.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 18.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 18.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 18.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 18.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 18.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 18.38	
o-Terphenyl	84-15-1	101	%	70-135	04.11.19 18.38	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-005	Date Collected:	04.08.19 10.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.11.19 21.34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.11.19 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	04.11.19 21.34	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 21.34	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-006	Date Collected:	04.08.19 10.56	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**144**	5.00	mg/kg	04.12.19 15.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 18.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 18.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 18.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 18.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 18.57	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 18.57	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-006	Date Collected:	04.08.19 10.56	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.11.19 21.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.11.19 21.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	148	%	70-130	04.11.19 21.53	**
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.11.19 21.53	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-007	Date Collected:	04.08.19 10.38	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.7**	4.98	mg/kg	04.12.19 15.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 19.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 19.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 19.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 19.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 19.16	
o-Terphenyl	84-15-1	99	%	70-135	04.11.19 19.16	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-007	Date Collected:	04.08.19 10.38	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.11.19 22.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.11.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	04.11.19 22.12	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.11.19 22.12	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS04B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-008	Date Collected:	04.08.19 10.44	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 16.00	Basis:	Wet Weight
Seq Number:	3085609				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**129**	4.96	mg/kg	04.12.19 15.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 19.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 19.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 19.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 19.35	
o-Terphenyl	84-15-1	100	%	70-135	04.11.19 19.35	

Certificate of Analytical Results 620611

LT Environmental, Inc., Arvada, CO

BEU DI 2 323H

Sample Id:	**SS04B**	Matrix:	Soil	Date Received:	04.10.19 11.54
Lab Sample Id:	620611-008	Date Collected:	04.08.19 10.44	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.11.19 10.00	Basis:	Wet Weight
Seq Number:	3085496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.11.19 22.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.11.19 22.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	04.11.19 22.31	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.11.19 22.31	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 620611

LT Environmental, Inc.

BEU DI 2 323H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085609 Matrix: Solid Date Prep: 04.10.19
MB Sample Id: 7675481-1-BLK LCS Sample Id: 7675481-1-BKS LCSD Sample Id: 7675481-1-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	263	105	253	101	90-110	4	20	mg/kg	04.12.19 12:21	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085609 Matrix: Soil Date Prep: 04.10.19
Parent Sample Id: 620316-005 MS Sample Id: 620316-005 S MSD Sample Id: 620316-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.5	248	321	101	323	102	90-110	1	20	mg/kg	04.12.19 16:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3085609 Matrix: Soil Date Prep: 04.10.19
Parent Sample Id: 620612-009 MS Sample Id: 620612-009 S MSD Sample Id: 620612-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.06	252	261	103	273	108	90-110	4	20	mg/kg	04.12.19 14:32	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085436 Matrix: Solid Date Prep: 04.11.19
MB Sample Id: 7675577-1-BLK LCS Sample Id: 7675577-1-BKS LCSD Sample Id: 7675577-1-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	1000	100	1040	104	70-135	4	20	mg/kg	04.11.19 11:00	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1160	116	70-135	4	20	mg/kg	04.11.19 11:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		130		125		70-135	%	04.11.19 11:00
o-Terphenyl	112		128		125		70-135	%	04.11.19 11:00

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 620611

LT Environmental, Inc.

BEU DI 2 323H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085437 Matrix: Solid Date Prep: 04.11.19
MB Sample Id: 7675578-1-BLK LCS Sample Id: 7675578-1-BKS LCSD Sample Id: 7675578-1-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	1060	106	1000	100	70-135	6	20	mg/kg	04.11.19 20:31	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1120	112	70-135	5	20	mg/kg	04.11.19 20:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		128		129		70-135	%	04.11.19 20:31
o-Terphenyl	111		128		123		70-135	%	04.11.19 20:31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085436 Matrix: Soil Date Prep: 04.11.19
Parent Sample Id: 620475-001 MS Sample Id: 620475-001 S MSD Sample Id: 620475-001 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)	14.4	997	929	92	933	92	70-135	0	20	mg/kg	04.11.19 11:57	
Diesel Range Organics (DRO)	<8.10	997	1030	103	1040	104	70-135	1	20	mg/kg	04.11.19 11:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		125		70-135	%	04.11.19 11:57
o-Terphenyl	119		118		70-135	%	04.11.19 11:57

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085437 Matrix: Soil Date Prep: 04.11.19
Parent Sample Id: 620611-001 MS Sample Id: 620611-001 S MSD Sample Id: 620611-001 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	907	91	919	92	70-135	1	20	mg/kg	04.11.19 21:28	
Diesel Range Organics (DRO)	<8.11	998	986	99	1010	101	70-135	2	20	mg/kg	04.11.19 21:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		124		70-135	%	04.11.19 21:28
o-Terphenyl	121		118		70-135	%	04.11.19 21:28

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 620611

LT Environmental, Inc.

BEU DI 2 323H

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

Seq Number: 3085496 Matrix: Solid Date Prep: 04.11.19

MB Sample Id: 7675649-1-BLK LCS Sample Id: 7675649-1-BKS LCSD Sample Id: 7675649-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.101	101	0.0995	100	70-130	1	35	mg/kg	04.11.19 13:04	
Toluene	<0.00199	0.0996	0.0980	98	0.0955	96	70-130	3	35	mg/kg	04.11.19 13:04	
Ethylbenzene	<0.00199	0.0996	0.102	102	0.0987	99	70-130	3	35	mg/kg	04.11.19 13:04	
m,p-Xylenes	<0.00398	0.199	0.204	103	0.198	99	70-130	3	35	mg/kg	04.11.19 13:04	
o-Xylene	<0.00199	0.0996	0.103	103	0.100	100	70-130	3	35	mg/kg	04.11.19 13:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		99		99		70-130	%	04.11.19 13:04
4-Bromofluorobenzene	101		104		105		70-130	%	04.11.19 13:04

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

Seq Number: 3085496 Matrix: Soil Date Prep: 04.11.19

Parent Sample Id: 620064-001 MS Sample Id: 620064-001 S MSD Sample Id: 620064-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0628	62	0.0640	63	70-130	2	35	mg/kg	04.11.19 14:45	X
Toluene	<0.00202	0.101	0.0810	80	0.0833	82	70-130	3	35	mg/kg	04.11.19 14:45	
Ethylbenzene	<0.00202	0.101	0.0836	83	0.0891	88	70-130	6	35	mg/kg	04.11.19 14:45	
m,p-Xylenes	0.00119	0.202	0.137	67	0.181	89	70-130	28	35	mg/kg	04.11.19 14:45	X
o-Xylene	<0.00202	0.101	0.0663	66	0.0899	89	70-130	30	35	mg/kg	04.11.19 14:45	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		94		70-130	%	04.11.19 14:45
4-Bromofluorobenzene	126		122		70-130	%	04.11.19 14:45

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 620611

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 DI 2 323H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP - 5295	Rush: 3 day	
Sampler's Name:	Robert M.	Due Date: 04/12/19	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 | 0.2	Thermometer ID		
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 A	S	04/08/19	1058	1'	1	X	X	X	discrete
SS01 B			1106	4'		X	X	X	
SS02 A			1020	2'		X	X	X	
SS02 B			1030	4'		X	X	X	
SS03 A			1050	2'		X	X	X	
SS03 B			1056	4'		X	X	X	
SS04 A			1038	2'		X	X	X	
SS04 B			1044	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 Robert Mcafee	Ann Ry	4/9/19 1400	2 Ann Ry		04-09-19 0435
3			4		4/10/19 14:30
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: 04/10/2019 11:54:00 AM

Work Order #: 620611

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04/10/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/10/2019

Kalei Stout

Analytical Report 622747

for

LT Environmental, Inc.

Project Manager: Ashley Ager

BEU DI2 #323H

02-MAY-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)

02-MAY-19

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

Reference: XENCO Report No(s): **622747**
BEU DI2 #323H
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) 622747. 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. 622747 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 622747

LT Environmental, Inc., Arvada, CO

BEU DI2 #323H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW05	S	04-29-19 14:15	0 - 4 ft	622747-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087610 Chloride by EPA 300
Lab Sample ID 622749-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 622747-001.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3087706 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 622747

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI2 #323H

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

Date Received in Lab: Wed May-01-19 11:13 am
Report Date: 02-MAY-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	622747-001					
	Field Id:	SW05					
	Depth:	0-4 ft					
	Matrix:	SOIL					
	Sampled:	Apr-29-19 14:15					
BTEX by EPA 8021B	***Extracted:***	May-01-19 15:00					
	Analyzed:	May-01-19 17:57					
	Units/RL:	mg/kg RL					
Benzene		<0.00199 0.00199					
Toluene		<0.00199 0.00199					
Ethylbenzene		<0.00199 0.00199					
m,p-Xylenes		<0.00398 0.00398					
o-Xylene		<0.00199 0.00199					
Total Xylenes		<0.00199 0.00199					
Total BTEX		<0.00199 0.00199					
Chloride by EPA 300	***Extracted:***	May-01-19 12:35					
	Analyzed:	May-01-19 16:37					
	Units/RL:	mg/kg RL					
Chloride		851 5.04					
TPH by SW8015 Mod	***Extracted:***	May-01-19 17:00					
	Analyzed:	May-01-19 20:15					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		<15.0 15.0					
Total GRO-DRO		<15.0 15.0					

LT Environmental, Inc., Arvada, CO

BEU DI2 #323H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622747-001	Date Collected:	04.29.19 14.15	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**851**	5.04	mg/kg	05.01.19 16.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 20.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 20.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 20.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 20.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.01.19 20.15	
o-Terphenyl	84-15-1	116	%	70-135	05.01.19 20.15	

Certificate of Analytical Results 622747

LT Environmental, Inc., Arvada, CO

BEU DI2 #323H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622747-001	Date Collected:	04.29.19 14.15	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.19 17.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.19 17.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.01.19 17.57	
4-Bromofluorobenzene	460-00-4	113	%	70-130	05.01.19 17.57	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 622747

LT Environmental, Inc.

BEU DI2 #323H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676918-1-BLK LCS Sample Id: 7676918-1-BKS LCSD Sample Id: 7676918-1-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	246	98	246	98	90-110	0	20	mg/kg	05.01.19 16:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622747-001 MS Sample Id: 622747-001 S MSD Sample Id: 622747-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	851	252	1050	79	1040	75	90-110	1	20	mg/kg	05.01.19 16:44	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622749-003 MS Sample Id: 622749-003 S MSD Sample Id: 622749-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.5	262	288	102	278	99	90-110	4	20	mg/kg	05.01.19 18:26	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087639 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676976-1-BLK LCS Sample Id: 7676976-1-BKS LCSD Sample Id: 7676976-1-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	1040	104	1010	101	70-135	3	20	mg/kg	05.01.19 19:35	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1030	103	70-135	6	20	mg/kg	05.01.19 19:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		121		129		70-135	%	05.01.19 19:35
o-Terphenyl	110		113		112		70-135	%	05.01.19 19:35

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

QC Summary 622747

LT Environmental, Inc.

BEU DI2 #323H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087639 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622747-001 MS Sample Id: 622747-001 S MSD Sample Id: 622747-001 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	1020	102	1030	103	70-135	1	20	mg/kg	05.01.19 20:35	
Diesel Range Organics (DRO)	<8.12	999	1040	104	1050	105	70-135	1	20	mg/kg	05.01.19 20:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		126		70-135	%	05.01.19 20:35
o-Terphenyl	107		114		70-135	%	05.01.19 20:35

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087706 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676935-1-BLK LCS Sample Id: 7676935-1-BKS LCSD Sample Id: 7676935-1-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	0.0984	98	70-130	2	35	mg/kg	05.01.19 14:48	
Toluene	<0.00198	0.0992	0.0982	99	0.0948	95	70-130	4	35	mg/kg	05.01.19 14:48	
Ethylbenzene	<0.00198	0.0992	0.108	109	0.103	103	70-130	5	35	mg/kg	05.01.19 14:48	
m,p-Xylenes	<0.00397	0.198	0.224	113	0.214	107	70-130	5	35	mg/kg	05.01.19 14:48	
o-Xylene	<0.00198	0.0992	0.107	108	0.102	102	70-130	5	35	mg/kg	05.01.19 14:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		92		92		70-130	%	05.01.19 14:48
4-Bromofluorobenzene	99		94		90		70-130	%	05.01.19 14:48

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087706 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622518-002 MS Sample Id: 622518-002 S MSD Sample Id: 622518-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0915	92	0.0951	96	70-130	4	35	mg/kg	05.01.19 15:26	
Toluene	<0.00200	0.0998	0.0854	86	0.0871	88	70-130	2	35	mg/kg	05.01.19 15:26	
Ethylbenzene	<0.00200	0.0998	0.0893	89	0.0898	90	70-130	1	35	mg/kg	05.01.19 15:26	
m,p-Xylenes	<0.00399	0.200	0.184	92	0.185	93	70-130	1	35	mg/kg	05.01.19 15:26	
o-Xylene	<0.00200	0.0998	0.0901	90	0.0907	91	70-130	1	35	mg/kg	05.01.19 15:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	05.01.19 15:26
4-Bromofluorobenzene	104		105		70-130	%	05.01.19 15:26

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: 627749

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 Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178 Email:	Ggreen@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:	BEUDI 2 #323H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5295	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/2/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 \ 0.2	Thermometer ID	VB
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)
SW05	S	4/29/19	1415	0'-4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/30/19 - 0840	2		5/1/19 1113
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 11 of 12

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/01/2019 12:00:00 AM

Work Order #: 622747

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/01/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/01/2019
Jessica Kramer

Analytical Report 622748

for

LT Environmental, Inc.

Project Manager: Ashley Ager

BEU DI2 #323

02-MAY-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)

02-MAY-19

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

Reference: XENCO Report No(s): **622748**
BEU DI2 #323
Project Address: Delaware Basin

Ashley Ager:

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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. 622748 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 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	04-29-19 13:45	4 ft	622748-001
FS02	S	04-29-19 13:00	2 ft	622748-002
FS03	S	04-29-19 13:05	4 ft	622748-003
SW01	S	04-29-19 14:20	0 - 4 ft	622748-004
SW02	S	04-29-19 13:35	0 - 2 ft	622748-005
SW03	S	04-29-19 13:30	0 - 2 ft	622748-006
SW04	S	04-29-19 14:00	0 - 4 ft	622748-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087706 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: 622748-006.

Certificate of Analysis Summary 622748

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI2 #323

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

Date Received in Lab: Wed May-01-19 11:13 am
Report Date: 02-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622748-001		622748-002		622748-003		622748-004		622748-005		622748-006	
	Field Id:	FS01		FS02		FS03		SW01		SW02		SW03	
	Depth:	4- ft		2- ft		4- ft		0-4 ft		0-2 ft		0-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-29-19 13:45		Apr-29-19 13:00		Apr-29-19 13:05		Apr-29-19 14:20		Apr-29-19 13:35		Apr-29-19 13:30	
BTEX by EPA 8021B	***Extracted:***	May-01-19 15:00		May-01-19 15:00		May-01-19 15:00		May-01-19 15:00		May-01-19 15:00		May-01-19 15:00	
	Analyzed:	May-01-19 18:16		May-01-19 18:35		May-01-19 18:54		May-01-19 19:13		May-01-19 20:46		May-01-19 21:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00403	0.00403	<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	May-01-19 12:35		May-01-19 12:35		May-01-19 12:35		May-01-19 12:35		May-01-19 12:35		May-01-19 12:35	
	Analyzed:	May-01-19 16:59		May-01-19 17:06		May-01-19 17:13		May-01-19 17:21		May-01-19 17:42		May-01-19 17:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		304	4.98	214	4.96	237	5.00	207	5.00	149	5.01	272	5.04
TPH by SW8015 Mod	***Extracted:***	May-01-19 17:00		May-01-19 17:00		May-01-19 17:00		May-01-19 17:00		May-01-19 17:00		May-01-19 17:00	
	Analyzed:	May-01-19 21:14		May-01-19 21:34		May-01-19 21:54		May-01-19 22:14		May-01-19 22:34		May-01-19 22:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622748

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI2 #323

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

Date Received in Lab: Wed May-01-19 11:13 am
Report Date: 02-MAY-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	622748-007					
	Field Id:	SW04					
	Depth:	0-4 ft					
	Matrix:	SOIL					
	Sampled:	Apr-29-19 14:00					
BTEX by EPA 8021B	***Extracted:***	May-01-19 15:00					
	Analyzed:	May-01-19 21:24					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00401 0.00401					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	***Extracted:***	May-01-19 12:35					
	Analyzed:	May-01-19 17:57					
	Units/RL:	mg/kg RL					
Chloride		230 4.95					
TPH by SW8015 Mod	***Extracted:***	May-01-19 17:00					
	Analyzed:	May-01-19 23:13					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		<15.0 15.0					
Total GRO-DRO		<15.0 15.0					

Jessica Kramer
Project Assistant

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-001	Date Collected:	04.29.19 13.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**304**	4.98	mg/kg	05.01.19 16.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 21.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 21.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 21.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 21.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 21.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	05.01.19 21.14	
o-Terphenyl	84-15-1	106	%	70-135	05.01.19 21.14	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-001	Date Collected:	04.29.19 13.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.19 18.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.19 18.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	05.01.19 18.16	
1,4-Difluorobenzene	540-36-3	104	%	70-130	05.01.19 18.16	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-002	Date Collected:	04.29.19 13.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**214**	4.96	mg/kg	05.01.19 17.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 21.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 21.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 21.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 21.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.01.19 21.34	
o-Terphenyl	84-15-1	105	%	70-135	05.01.19 21.34	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-002	Date Collected:	04.29.19 13.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.01.19 18.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.01.19 18.35	
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.01.19 18.35	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-003	Date Collected:	04.29.19 13.05	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	5.00	mg/kg	05.01.19 17.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 21.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 21.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 21.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 21.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 21.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.01.19 21.54	
o-Terphenyl	84-15-1	108	%	70-135	05.01.19 21.54	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-003	Date Collected:	04.29.19 13.05	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.01.19 18.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.01.19 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.01.19 18.54	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.01.19 18.54	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-004	Date Collected:	04.29.19 14.20	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**207**	5.00	mg/kg	05.01.19 17.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 22.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 22.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 22.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 22.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 22.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.01.19 22.14	
o-Terphenyl	84-15-1	104	%	70-135	05.01.19 22.14	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-004	Date Collected:	04.29.19 14.20	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.01.19 19.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.01.19 19.13	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.01.19 19.13	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-005	Date Collected:	04.29.19 13.35	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**149**	5.01	mg/kg	05.01.19 17.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 22.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 22.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 22.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 22.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 22.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.01.19 22.34	
o-Terphenyl	84-15-1	106	%	70-135	05.01.19 22.34	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-005	Date Collected:	04.29.19 13.35	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.01.19 20.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.01.19 20.46	
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.01.19 20.46	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-006	Date Collected:	04.29.19 13.30	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**272**	5.04	mg/kg	05.01.19 17.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 22.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 22.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 22.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.01.19 22.54	
o-Terphenyl	84-15-1	113	%	70-135	05.01.19 22.54	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-006	Date Collected:	04.29.19 13.30	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.01.19 21.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.01.19 21.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.01.19 21.05	
4-Bromofluorobenzene	460-00-4	143	%	70-130	05.01.19 21.05	**

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-007	Date Collected:	04.29.19 14.00	Sample Depth:	0 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.01.19 12.35	Basis:	Wet Weight
Seq Number:	3087610				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	4.95	mg/kg	05.01.19 17.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.01.19 17.00	Basis:	Wet Weight
Seq Number:	3087639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.01.19 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.01.19 23.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.01.19 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.01.19 23.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.01.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.01.19 23.13	
o-Terphenyl	84-15-1	104	%	70-135	05.01.19 23.13	

Certificate of Analytical Results 622748

LT Environmental, Inc., Arvada, CO

BEU DI2 #323

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.01.19 11.13
Lab Sample Id:	622748-007	Date Collected:	04.29.19 14.00	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.01.19 15.00	Basis:	Wet Weight
Seq Number:	3087706				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.01.19 21.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.01.19 21.24	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.01.19 21.24	

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 622748

LT Environmental, Inc.

BEU DI2 #323

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676918-1-BLK LCS Sample Id: 7676918-1-BKS LCSD Sample Id: 7676918-1-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	246	98	246	98	90-110	0	20	mg/kg	05.01.19 16:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622747-001 MS Sample Id: 622747-001 S MSD Sample Id: 622747-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	851	252	1050	79	1040	75	90-110	1	20	mg/kg	05.01.19 16:44	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087610 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622749-003 MS Sample Id: 622749-003 S MSD Sample Id: 622749-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.5	262	288	102	278	99	90-110	4	20	mg/kg	05.01.19 18:26	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087639 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676976-1-BLK LCS Sample Id: 7676976-1-BKS LCSD Sample Id: 7676976-1-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	1040	104	1010	101	70-135	3	20	mg/kg	05.01.19 19:35	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1030	103	70-135	6	20	mg/kg	05.01.19 19:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		121		129		70-135	%	05.01.19 19:35
o-Terphenyl	110		113		112		70-135	%	05.01.19 19:35

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

QC Summary 622748

LT Environmental, Inc.

BEU DI2 #323

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087639 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622747-001 MS Sample Id: 622747-001 S MSD Sample Id: 622747-001 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	1020	102	1030	103	70-135	1	20	mg/kg	05.01.19 20:35	
Diesel Range Organics (DRO)	<8.12	999	1040	104	1050	105	70-135	1	20	mg/kg	05.01.19 20:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		126		70-135	%	05.01.19 20:35
o-Terphenyl	107		114		70-135	%	05.01.19 20:35

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087706 Matrix: Solid Date Prep: 05.01.19
MB Sample Id: 7676935-1-BLK LCS Sample Id: 7676935-1-BKS LCSD Sample Id: 7676935-1-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	0.0984	98	70-130	2	35	mg/kg	05.01.19 14:48	
Toluene	<0.00198	0.0992	0.0982	99	0.0948	95	70-130	4	35	mg/kg	05.01.19 14:48	
Ethylbenzene	<0.00198	0.0992	0.108	109	0.103	103	70-130	5	35	mg/kg	05.01.19 14:48	
m,p-Xylenes	<0.00397	0.198	0.224	113	0.214	107	70-130	5	35	mg/kg	05.01.19 14:48	
o-Xylene	<0.00198	0.0992	0.107	108	0.102	102	70-130	5	35	mg/kg	05.01.19 14:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		92		92		70-130	%	05.01.19 14:48
4-Bromofluorobenzene	99		94		90		70-130	%	05.01.19 14:48

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087706 Matrix: Soil Date Prep: 05.01.19
Parent Sample Id: 622518-002 MS Sample Id: 622518-002 S MSD Sample Id: 622518-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0915	92	0.0951	96	70-130	4	35	mg/kg	05.01.19 15:26	
Toluene	<0.00200	0.0998	0.0854	86	0.0871	88	70-130	2	35	mg/kg	05.01.19 15:26	
Ethylbenzene	<0.00200	0.0998	0.0893	89	0.0898	90	70-130	1	35	mg/kg	05.01.19 15:26	
m,p-Xylenes	<0.00399	0.200	0.184	92	0.185	93	70-130	1	35	mg/kg	05.01.19 15:26	
o-Xylene	<0.00200	0.0998	0.0901	90	0.0907	91	70-130	1	35	mg/kg	05.01.19 15:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	05.01.19 15:26
4-Bromofluorobenzene	104		105		70-130	%	05.01.19 15:26

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: 627748

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 Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	Ggreen@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:	BEUDI 2 #323	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5295	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/2/19	

SAMPLE RECEIPT			
Temperature (°C):	0.2/0.2	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	
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 0=8021)	Chloride (EPA 300.0)
FS01	S	4/29/19	1345	4'	1	X	X	X
FS02	S		1300	2'	1			
FS03	S		1305	4'	1			
SW01	S		1420	0'-4'	1			
SW02	S		1335	0'-2'	1			
SW03	S		1330	0'-2'	1			
SW04	S		1400	0-4'	1			
					1			

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/30/19 08:40	2		5/1/19 1113
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/01/2019 11:13:00 AM

Work Order #: 622748

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/01/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/01/2019
Jessica Kramer

ATTACHMENT 3: SOIL SMAPLING LOGS

LT Environmental, Inc.

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

Compliance · Engineering · Remediation

Identifier: SS01	Date: 04/08/19
Project Name: BEU ~~BT~~ 2 323H	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2ft	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1058 dry	580	5.7	N		0–1	1'	S	Silty sand Brown MG
1100 dry	580	3.0	N		2	2'	S	Sand trace clay grey white MG
1103 dry	380	2.5	N		3	3'	S	Clayey sand white MG
1106 dry	200	1.8	N		4	4'	S	Sand trace clay trace silt MG Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: SS02	Date: 04/08/19
Project Name: BFU DI2 323H	RP Number:
Logged By: Robert M	Method: Pot hole
Hole Diameter: 2ft	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1015 dry	368	3.1	N		0–1	1'	S	silty sand Grey Brown MG
1020 dry	<128	4.5	N		1–2	2'	S	silty sand Grey Brown MG
1025 dry	<128	3.1	N		2–3	3'	S	Sandy Clay Grey MG
1030 dry	<128	3.1	N		3–4	4'	S	Clayey sand Grey white MG
					4–5			
					5–6			
					6–7			
					7–8			
					8–9			
					9–10			
					10–11			
					11–12			

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

Identifier: SS03	Date: 04/08/19
Project Name: BELL DI 2 323H	RP Number:
Logged By: Robert M.	Method:
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1048 dry	<128	4.8	N		0	1'	S	Sand trace Clay MG Grey
1050 dry	<128	5.1	N		1	2'	S	Sand trace Clay MG Grey
1053 dry	<128	4.0	N		2	3'	S	Sandy Clay MG Grey/White
1056 dry	<128	4.6	N		3	4'	S	Sandy Clay MG Grey White
					4			
					5			
					6			
					7			
					8			
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LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: SS04	Date: 04/08/19
Project Name: BEU DI 2 323H	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2 ft	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1036 dry	<128	1.2	N		0–1	1'	S	Silty sand PG Dark Brown
1038 dry	<128	2.0	N		2	2'	S	sand trace clay PG Brown White
1041 dry	<128	1.8	N		3	3'	S	Clayey sand MG Grey
1044 dry	200	1.5	N		4	4'	S	Sandy Clay MG Grey White
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

Northeastern view of final excavation extent.

Project: 012919038	XTO Energy, Inc. Big Eddy Unit DI2 323H	LTE Advancing Opportunity
April 29, 2019	Photographic Log	

Northwestern view of final excavation extent.

Project: 012919038	XTO Energy, Inc. Big Eddy Unit DI2 323H	LTE Advancing Opportunity
April 29, 2019	Photographic Log	