March 22, 2019

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

RE: Closure Request
Big Eddy Unit DI #4 Battery
Remediation Permit Number 2RP-5162
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing excavation and soil sampling activities at the Big Eddy Unit DI #4 Battery (Site) in Unit B, Section 5, Township 20 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation and soil sampling activities was to address impacts to soil after produced water was released within the process equipment berm.

On December 22, 2018, approximately 23.8 barrels (bbls) of produced water were released from a connection on a free-water knockout (FWKO) line due to corrosion. Vacuum trucks were used to recover the free-standing fluid; approximately 15 bbls of produced water were recovered. The fluids were routed through the alternate FWKO until the connection was repaired. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on January 4, 2019, and was assigned Remediation Permit Number (RP) 2RP-5162 (Attachment 1). Based on the excavation activities and results of the soil sampling events, XTO is requesting no further action for this release.

BACKGROUND

The release occurred after August 14, 2018; therefore, 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 CP00722, located approximately 1.14 miles northeast of the Site, with a depth to groundwater of 140 feet bgs and a total depth of 220 feet bgs. The water well is approximately 17 feet lower in elevation than the Site. The nearest continuously flowing water or significant watercourse is seasonal stream located 0.9 miles west 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 overlying an unstable karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

PRELIMINARY SOIL SAMPLING ACTIVITIES

On December 27, 2018, LTE personnel inspected the Site to evaluate the release extent. Surface staining was observed in the release area within the process equipment berm. 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-gasoline range organics (GRO), TPH-diesel range organics (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 chloride concentrations exceeded 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 soil sample analytical results, excavation of impacted soil was required.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

During March 2019, LTE personnel returned to the Site to delineate the release extent via potholing and oversee excavation of impacted soil. Due to active process equipment and pipelines throughout the release area, delineation and excavation activities were completed using a hydro-vacuum.

Thirteen potholes (PH1 through PH13) were advanced in and around the release area using a hydro-vacuum to delineate the lateral and vertical extent of impacted soil. Soil was field screened in each pothole using a PID and Hach® chloride QuanTab® test strips. Two soil samples were collected from each pothole in PH1 through PH13. Soil samples were collected from depths of 0.5 feet and 1 foot bgs from potholes PH1 through PH6 and PH11 through PH13; soil samples were collected from depths of 2 feet and 4 feet bgs from pothole PH7; soil samples were collected from depths of 2 feet and 5 feet bgs from pothole PH8; and soil samples were collected from

depths of 1 foot and 2 feet bgs from potholes PH9 and PH10. Potholes PH8, PH9, and PH10 were also associated with excavation activities and are discussed further below. The pothole soil sample locations and depths are presented on Figure 3 and soil sample logs are included as Attachment 3.

Delineation potholing and excavation activities were completed simultaneously. LTE personnel directed excavation activities based on visual observations, field screening activities, and laboratory analytical results for preliminary soil samples SS01 through SS04. Due to active process equipment and pipelines throughout the release area, excavation of impacted soil was completed to the extent possible in three separate excavations. The horizontal extent of the excavations are presented on Figure 3.

The northeast excavation was completed in the area around preliminary soil sample SS04. The final excavation measured approximately 160 square feet in area with an average depth of 3 feet bgs. Approximately 18 cubic yards of impacted soil were removed from the excavation via hydro-vacuum. Pothole PH8 was advanced in the excavation and soil samples PH8 and PH8A were collected from depths of 2 feet and 5 feet bgs, respectively.

The southeast excavation was completed in the area around preliminary soil sample SS03. The final excavation measured approximately 260 square feet in area with a depth of 2 feet to 4 feet bgs. Approximately 19 cubic yards of impacted soil were removed from the excavation via hydro-vacuum. Soil sample FS1 was collected from the floor of the excavation from a depth of 4 feet bgs.

The central excavation was completed in the release area based on visual observations and field screening activities. The final excavation measured approximately 85 square feet in area with an average depth of 1 foot bgs. Approximately 1.5 cubic yards of impacted soil was removed from the excavation via hydro-vacuum. Pothole PH10 was advanced in the excavation and soil samples PH10 and PH10A were collected from depths of 1 foot and 2 feet bgs, respectively.

Soil was removed via hydro-vacuum in the location of preliminary soil sample SS01. Pothole PH9 was advanced in the location of soil sample SS01 and soil samples PH9 and PH9A were collected from depths of 1 foot and 2 feet bgs, respectively.

The pothole and excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The hydrovac slurry was transported and properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that chloride concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS04. Laboratory analytical results

indicated that chloride and/or TPH concentrations exceeded the NMOCD Table 1 closure criteria in pothole soil samples PH6A, PH8, PH9, PH10, and PH10A. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all other pothole soil samples collected from potholes PH1 through PH13 and excavation floor sample FS1.

Impacted soil was excavated to the extent possible. Further excavation of impacted soil was limited by active process equipment and pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site process equipment and pipelines. This XTO safety policy is established to protect workers and to reduce the likelihood of compromising the foundation of the process equipment. This policy was enforced where impacted soil was identified within two feet of active process equipment or pipelines. Laboratory analytical results are presented on Figures 2 and Figure 3 and summarized in Table 1, and the complete laboratory analytical reports are included in Attachment 2.

CONCLUSIONS

A total of approximately 37 cubic yards of impacted soil were removed 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 active process equipment and pipelines. Laboratory analytical results for pothole soil samples PH6A, PH8, PH9, PH10, and PH10A indicated that soil with chloride and/or TPH concentrations exceeding the NMOCD Table 1 closure criteria was left in place within 2 feet of active process equipment and pipelines. An estimated 130 cubic yards of impacted soil remain in place, assuming a maximum 3 foot depth based on pothole soil samples PH1A, PH2A, PH3A, PH7, PH8A, PH9A, PH12A, and PH13A that were compliant with the NMOCD Table 1 closure criteria. Vertical delineation was defined at 4 feet bgs in PH7A, PH8A, and FS1. Lateral delineation was achieved with PH1, PH3, PH2, PH4, PH11, PH5, PH13, and PH12.

XTO requests to backfill the existing excavations and complete remediation during any future major well pad construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. Free-standing fluids were recovered during initial response activities and no saturated soil remains in place. The impacted soil remaining in place is delineated vertically and laterally by soil samples collected from potholes PH1 through PH13.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release number 2RP-5162. Upon approval of this closure request, XTO will backfill the excavations 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 Ms. Adrian Baker at (432) 887-1255.

Sincerely,
LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation and Excavation Soil Sample Locations
Table 1 Soil Analytical Reports

Attachment 1 Initial/Final NMOCD Forms C-141 (2RP-5162)
Attachment 2 Laboratory Analytical Reports
Attachment 3 Soil Sample Logs
Attachment 4 Photographic Log

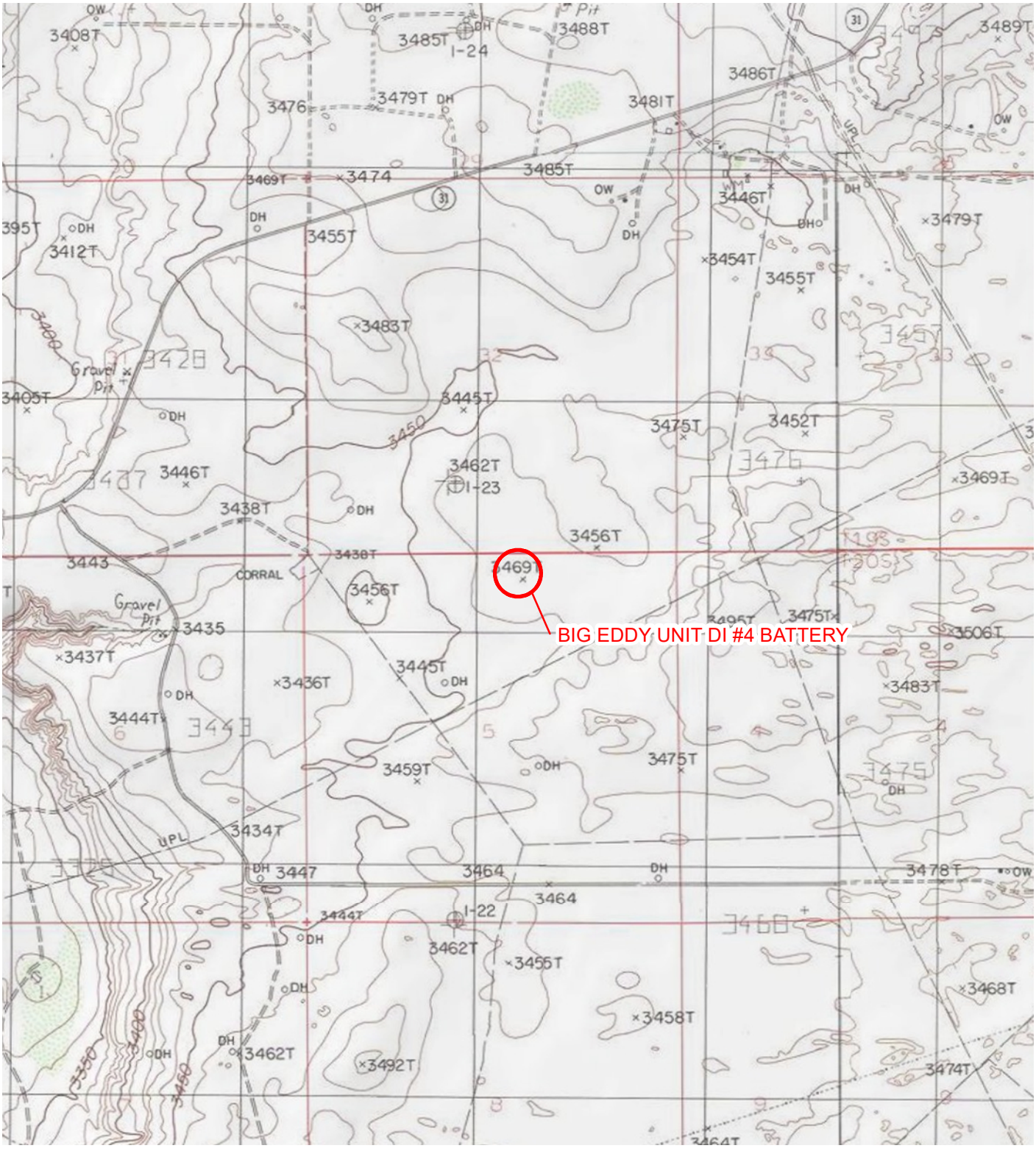

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5162

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT DI #4 BATTERY
UNIT B SEC 5 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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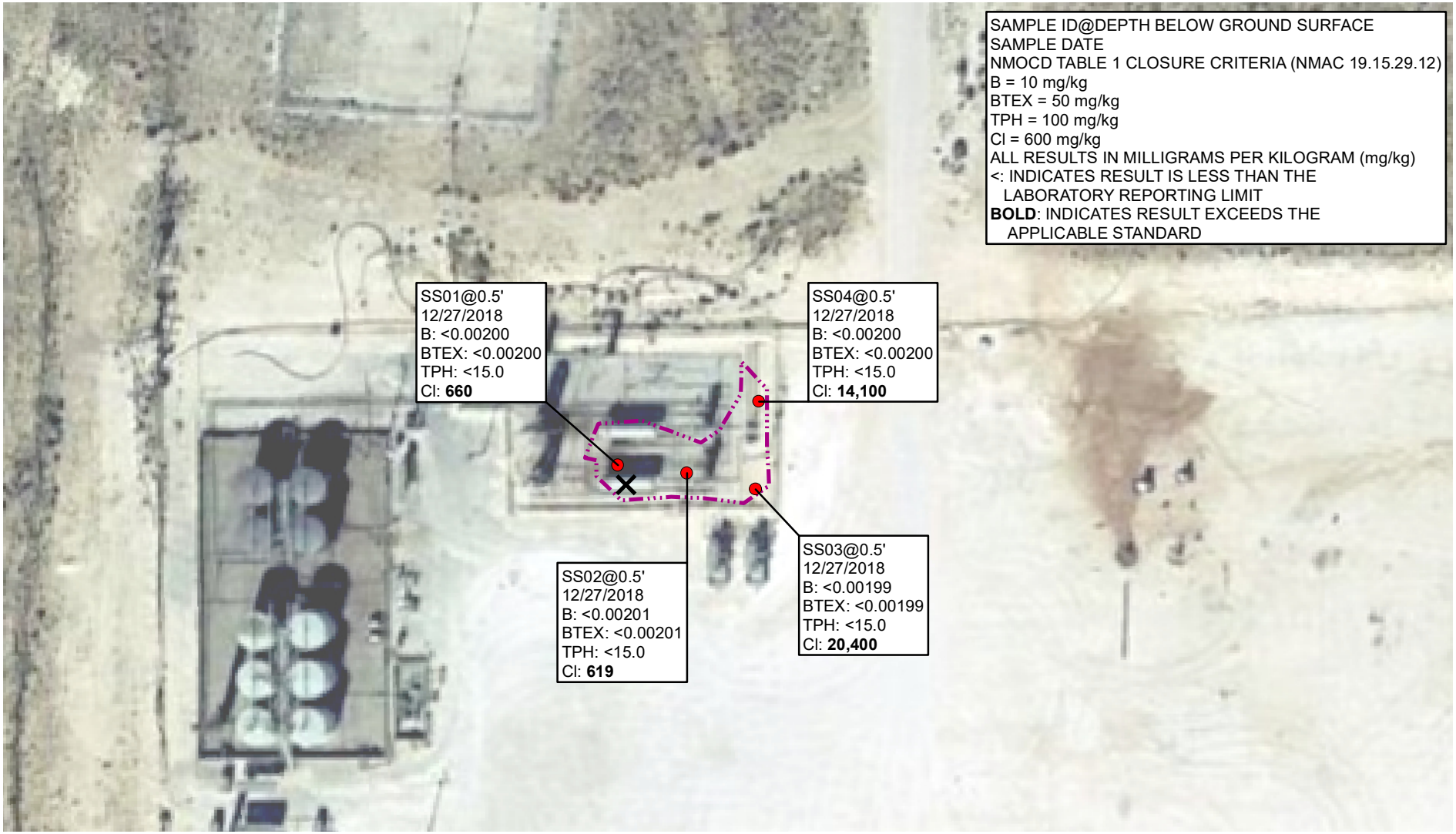


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- RELEASE EXTENT

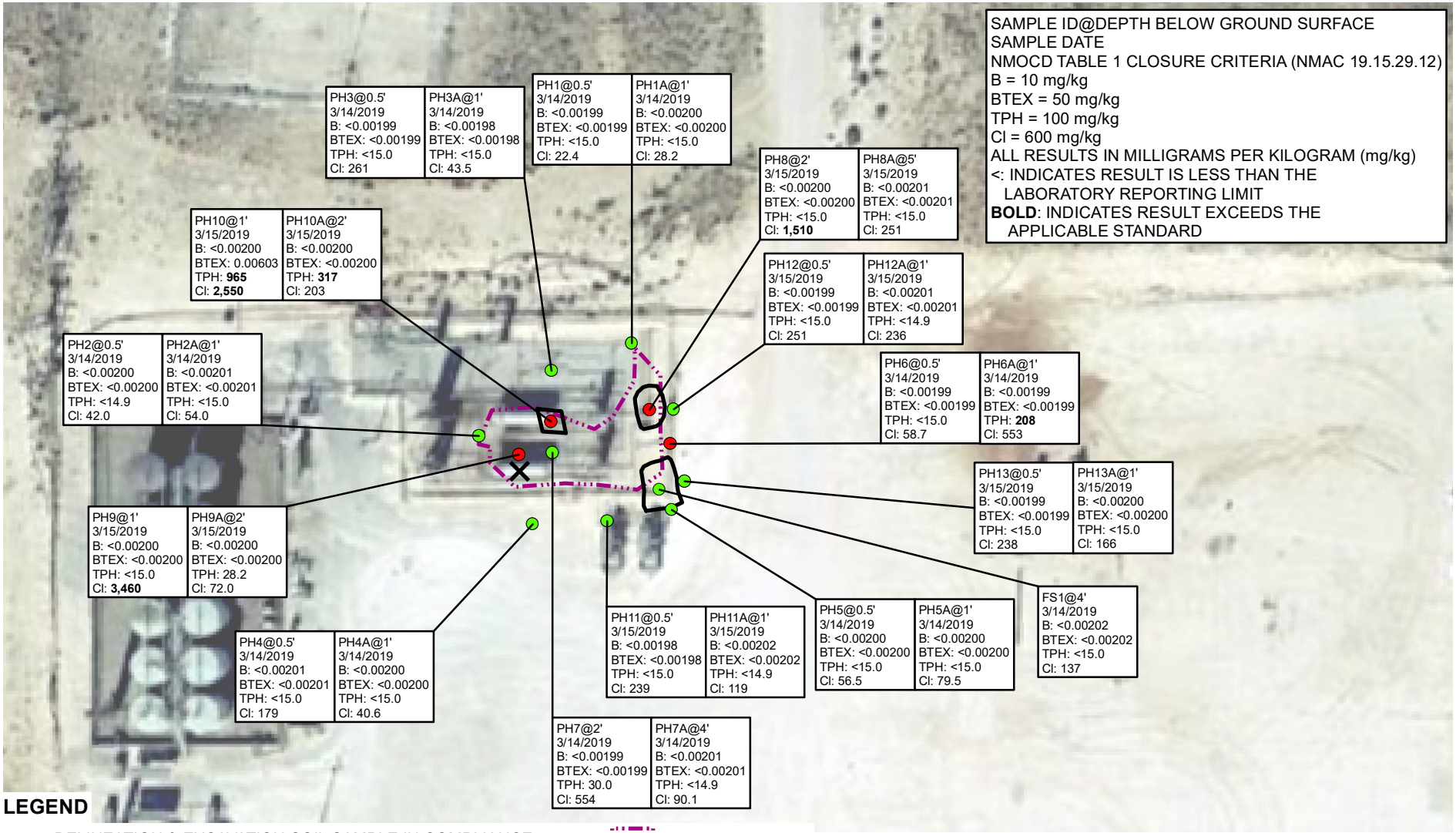
0 60 120
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5162

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
BIG EDDY UNIT DI #4 BATTERY
UNIT B SEC 5 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918201_BIG EDDY UNIT DI #4 BATTERY\012918201_FIG02_PRELIMINARY SS_2019_5162.mxd



LEGEND

- DELINEATION & EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- DELINEATION & EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- RELEASE LOCATION
- RELEASE EXTENT
- EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5162

FIGURE 3
DELINEATION & EXCAVATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT DI #4 BATTERY
UNIT B SEC 5 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918201_BIG EDDY UNIT DI #4 BATTERY\012918201_FIG03_EXCAVATION SS_2019_5162.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT DI #4 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5162
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	12/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**660**
SS02	0.5	12/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	**619**
SS03	0.5	12/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	**20,400**
SS04	0.5	12/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**14,100**
FS1	4	03/14/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	137
PH1	0.5	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	22.4
PH1A	1	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	28.2
PH2	0.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	42.0
PH2A	1	03/14/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	54.0
PH3	0.5	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	261
PH3A	1	03/14/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	43.5
PH4	0.5	03/14/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	179
PH4A	1	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	40.6
PH5	0.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	56.5
PH5A	1	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	79.5
PH6	0.5	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	58.7
PH6A	1	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	172	36.0	172	**208**	553
PH7	2	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	30.0	<14.9	30.0	30.0	554
PH7A	4	03/14/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	90.1
PH8	2	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**1,510**
PH8A	5	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	251
PH9	1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	**3,460**
PH9A	2	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	28.2	<15.0	28.2	28.2	72.0
PH10	1	03/15/2019	<0.00200	<0.00200	0.00202	0.00401	0.00603	23.6	757	184	781	**965**	**2,550**
PH10A	2	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	256	61.4	256	**317**	203

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT DI #4 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5162
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH11	0.5	03/15/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	239
PH11A	1	03/15/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	119
PH12	0.5	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	251
PH12A	1	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	236
PH13	0.5	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	238
PH13A	1	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	166
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NMAC - New Mexico Administrative Code

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5162)

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	NAB1900951790
District RP	2 2RP-5162
Facility ID	
Application ID	pAB1900951299

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)* NAB1900951790
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.608763° Longitude -103.890309°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit DI #4 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 12/22/2018	API# *(if applicable)* 30-015-42479 (BEU DI #4 270H)

Unit Letter	Section	Township	Range	County
B	5	20S	31E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 23.8	Volume Recovered (bbls) 15
	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

Produced water was released from a corner connection on a line from the FWKO due to corrosion. Vacuum trucks recovered standing fluid. Fluids were routed through the alternate FWKO until connection was repaired. An environmental contractor has been retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1900951790
District RP	2 2RP-5162
Facility ID	
Application ID	pAB1900951299

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Kyle Littrell Date: 1-4-19

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

OCD Only

Received by: Amalia Barrameda Date: 1/09/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5162
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5162
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: March 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	
District RP	2RP-5162
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: March 22, 2019

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

OCD Only

Received by: Date:

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

Signature: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5162
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: March 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 609961

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU DI-4

09-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

09-JAN-19

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

Reference: XENCO Report No(s): **609961**
BEU DI-4
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) 609961. 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. 609961 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 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	12-27-18 10:20	0.5 ft	609961-001
SS03	S	12-27-18 10:40	0.5 ft	609961-002
SS04	S	12-27-18 10:50	0.5 ft	609961-003
SS02	S	12-27-18 11:20	0.5 ft	609961-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3074886 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3074919 Inorganic Anions by EPA 300
Lab Sample ID 610155-001 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: 609961-003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3075244 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 609634-132 S,609634-132 SD.

Certificate of Analysis Summary 609961

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI-4

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

Date Received in Lab: Fri Dec-28-18 12:35 pm
Report Date: 09-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	609961-001		609961-002		609961-003		609961-004					
	Field Id:	SS01		SS03		SS04		SS02					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Dec-27-18 10:20		Dec-27-18 10:40		Dec-27-18 10:50		Dec-27-18 11:20					
BTEX by EPA 8021B	***Extracted:***	Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15		Jan-04-19 08:15					
	Analyzed:	Jan-04-19 11:39		Jan-04-19 16:03		Jan-04-19 17:19		Jan-04-19 11:58					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Jan-04-19 14:00		Jan-04-19 14:00		Jan-04-19 14:30		Jan-04-19 14:30					
	Analyzed:	Jan-04-19 21:33		Jan-04-19 21:39		Jan-05-19 01:01		Jan-04-19 23:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		660	4.97	20400	100	14100	99.2	619	4.99				
TPH by SW8015 Mod	***Extracted:***	Jan-03-19 17:00		Jan-03-19 17:00		Jan-03-19 17:00		Jan-03-19 17:00					
	Analyzed:	Jan-08-19 13:56		Jan-08-19 14:16		Jan-08-19 14:36		Jan-08-19 14:55					
	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)		<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				
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-001	Date Collected:	12.27.18 10.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.04.19 14.00	Basis:	Wet Weight
Seq Number:	3074917				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**660**	4.97	mg/kg	01.04.19 21.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.03.19 17.00	Basis:	Wet Weight
Seq Number:	3075244				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.08.19 13.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.08.19 13.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.08.19 13.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.08.19 13.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	01.08.19 13.56	
o-Terphenyl	84-15-1	80	%	70-135	01.08.19 13.56	

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-001	Date Collected:	12.27.18 10.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.04.19 11.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 11.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.04.19 11.39	
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.04.19 11.39	

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-002	Date Collected:	12.27.18 10.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.04.19 14.00	Basis:	Wet Weight
Seq Number:	3074917				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20400**	100	mg/kg	01.04.19 21.39		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.03.19 17.00	Basis:	Wet Weight
Seq Number:	3075244				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.08.19 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.08.19 14.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.08.19 14.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.08.19 14.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	01.08.19 14.16	
o-Terphenyl	84-15-1	83	%	70-135	01.08.19 14.16	

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-002	Date Collected:	12.27.18 10.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.04.19 16.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.04.19 16.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.04.19 16.03	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.04.19 16.03	

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id: **SS04** Matrix: Soil Date Received:12.28.18 12.35
Lab Sample Id: 609961-003 Date Collected: 12.27.18 10.50 Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: OJS % Moisture:
Analyst: OJS Date Prep: 01.04.19 14.30 Basis: Wet Weight
Seq Number: 3074919

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14100**	99.2	mg/kg	01.05.19 01.01		20

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ALJ % Moisture:
Analyst: ALJ Date Prep: 01.03.19 17.00 Basis: Wet Weight
Seq Number: 3075244

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.08.19 14.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.08.19 14.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.08.19 14.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.08.19 14.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.08.19 14.36	
o-Terphenyl	84-15-1	81	%	70-135	01.08.19 14.36	

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-003	Date Collected:	12.27.18 10.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.04.19 17.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.04.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.04.19 17.19	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.04.19 17.19	

Certificate of Analytical Results 609961

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-004	Date Collected:	12.27.18 11.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.04.19 14.30	Basis:	Wet Weight
Seq Number:	3074919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**619**	4.99	mg/kg	01.04.19 23.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.03.19 17.00	Basis:	Wet Weight
Seq Number:	3075244				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.08.19 14.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.08.19 14.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.08.19 14.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.08.19 14.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.08.19 14.55	
o-Terphenyl	84-15-1	82	%	70-135	01.08.19 14.55	

LT Environmental, Inc., Arvada, CO

BEU DI-4

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.28.18 12.35
Lab Sample Id:	609961-004	Date Collected:	12.27.18 11.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.04.19 08.15	Basis:	Wet Weight
Seq Number:	3074886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.04.19 11.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.04.19 11.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.04.19 11.58	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.04.19 11.58	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

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 609961

LT Environmental, Inc.

BEU DI-4

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074917 Matrix: Solid Date Prep: 01.04.19
MB Sample Id: 7669223-1-BLK LCS Sample Id: 7669223-1-BKS LCSD Sample Id: 7669223-1-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	252	101	252	101	90-110	0	20	mg/kg	01.04.19 18:34	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074919 Matrix: Solid Date Prep: 01.04.19
MB Sample Id: 7669225-1-BLK LCS Sample Id: 7669225-1-BKS LCSD Sample Id: 7669225-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	246	98	90-110	4	20	mg/kg	01.04.19 22:09	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074917 Matrix: Soil Date Prep: 01.04.19
Parent Sample Id: 609906-016 MS Sample Id: 609906-016 S MSD Sample Id: 609906-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.95	250	260	101	264	102	90-110	2	20	mg/kg	01.04.19 18:53	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074917 Matrix: Soil Date Prep: 01.04.19
Parent Sample Id: 609906-017 MS Sample Id: 609906-017 S MSD Sample Id: 609906-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	255	250	502	99	493	95	90-110	2	20	mg/kg	01.04.19 20:22	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074919 Matrix: Soil Date Prep: 01.04.19
Parent Sample Id: 609961-004 MS Sample Id: 609961-004 S MSD Sample Id: 609961-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	619	250	825	82	808	76	90-110	2	20	mg/kg	01.04.19 23:57	X

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 609961

LT Environmental, Inc.

BEU DI-4

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3074919 Matrix: Soil Date Prep: 01.04.19
Parent Sample Id: 610155-001 MS Sample Id: 610155-001 S MSD Sample Id: 610155-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.9	248	266	98	271	100	90-110	2	20	mg/kg	01.04.19 22:27	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075244 Matrix: Solid Date Prep: 01.03.19
MB Sample Id: 7669440-1-BLK LCS Sample Id: 7669440-1-BKS LCSD Sample Id: 7669440-1-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)	<7.99	998	808	81	811	81	70-135	0	20	mg/kg	01.08.19 11:57	
Diesel Range Organics (DRO)	<8.11	998	889	89	889	89	70-135	0	20	mg/kg	01.08.19 11:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		109		108		70-135	%	01.08.19 11:57
o-Terphenyl	130		104		104		70-135	%	01.08.19 11:57

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075244 Matrix: Soil Date Prep: 01.03.19
Parent Sample Id: 609634-132 MS Sample Id: 609634-132 S MSD Sample Id: 609634-132 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)	<8.00	1000	828	83	788	79	70-135	5	20	mg/kg	01.08.19 12:57	
Diesel Range Organics (DRO)	<8.13	1000	902	90	41300	4147	70-135	191	20	mg/kg	01.08.19 12:57	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	143	**	138	**	70-135	%	01.08.19 12:57
o-Terphenyl	140	**	137	**	70-135	%	01.08.19 12:57

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 609961

LT Environmental, Inc.

BEU DI-4

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

Seq Number: 3074886 Matrix: Solid Date Prep: 01.04.19

MB Sample Id: 7669221-1-BLK LCS Sample Id: 7669221-1-BKS LCSD Sample Id: 7669221-1-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	0.109	110	0.111	111	70-130	2	35	mg/kg	01.04.19 09:47	
Toluene	<0.000453	0.0994	0.104	105	0.104	104	70-130	0	35	mg/kg	01.04.19 09:47	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.103	103	70-130	1	35	mg/kg	01.04.19 09:47	
m,p-Xylenes	<0.00101	0.199	0.207	104	0.205	103	70-130	1	35	mg/kg	01.04.19 09:47	
o-Xylene	<0.000342	0.0994	0.103	104	0.103	103	70-130	0	35	mg/kg	01.04.19 09:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		101		70-130	%	01.04.19 09:47
4-Bromofluorobenzene	90		93		92		70-130	%	01.04.19 09:47

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

Seq Number: 3074886 Matrix: Soil Date Prep: 01.04.19

Parent Sample Id: 609961-001 MS Sample Id: 609961-001 S MSD Sample Id: 609961-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.104	104	0.100	100	70-130	4	35	mg/kg	01.04.19 10:25	
Toluene	<0.000455	0.0998	0.0989	99	0.0988	99	70-130	0	35	mg/kg	01.04.19 10:25	
Ethylbenzene	<0.000564	0.0998	0.0975	98	0.0973	97	70-130	0	35	mg/kg	01.04.19 10:25	
m,p-Xylenes	<0.00101	0.200	0.194	97	0.195	98	70-130	1	35	mg/kg	01.04.19 10:25	
o-Xylene	<0.000344	0.0998	0.0967	97	0.0963	96	70-130	0	35	mg/kg	01.04.19 10:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		70-130	%	01.04.19 10:25
4-Bromofluorobenzene	95		98		70-130	%	01.04.19 10:25

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: 609961

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 Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM, 88220
Phone:	432.704.5178	Email:	abaker@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-4	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	1/8/2018

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 C+0	Thermometer ID	98	
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)
SS01	S	12/27	10:20	0.5'	1	X	X	X
SS03	S		10:40	0.5'	1	X	X	X
SS04	S		10:50	0.5'	1	X	X	X
SS02	S		11:20	0.5'	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	Lynda Laumbach	Trinity Rae Elliott	12/27/2017 14:46	2	Taylor Lacy		1755 12/28
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 18 of 20

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/28/2018 12:35:00 PM

Work Order #: 609961

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12/28/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/28/2018
Jessica Kramer

Analytical Report 617901

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU DI4

19-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)

19-MAR-19

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

Reference: XENCO Report No(s): **617901**
BEU DI4
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) 617901. 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. 617901 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 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH1	S	03-14-19 11:50	5 ft	617901-001
PH1A	S	03-14-19 12:10	1 ft	617901-002
PH2	S	03-14-19 13:00	.5 ft	617901-003
PH2A	S	03-14-19 13:15	1 ft	617901-004
PH3	S	03-14-19 13:20	.5 ft	617901-005
PH3A	S	03-14-19 13:25	1 ft	617901-006
PH4	S	03-14-19 13:50	.5 ft	617901-007
PH4A	S	03-14-19 13:55	1 ft	617901-008
PH5	S	03-14-19 14:00	.5 ft	617901-009
PH5A	S	03-14-19 14:15	1 ft	617901-010
PH6	S	03-14-19 15:05	.5 ft	617901-011
PH6A	S	03-14-19 15:10	1 ft	617901-012
PH7	S	03-14-19 14:45	2 ft	617901-013
PH7A	S	03-14-19 14:54	4 ft	617901-014
FS1	S	03-14-19 08:45	4 ft	617901-015

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082537 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: 617901-014.

Batch: LBA-3082553 Inorganic Anions by EPA 300
Chloride Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 617901-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015

Lab Sample ID 617901-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 617901-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 617901

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI4

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

Date Received in Lab: Mon Mar-18-19 07:45 am
Report Date: 19-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617901-001		617901-002		617901-003		617901-004		617901-005		617901-006	
	Field Id:	PH1		PH1A		PH2		PH2A		PH3		PH3A	
	Depth:	5- ft		1- ft		.5- ft		1- ft		.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-14-19 11:50		Mar-14-19 12:10		Mar-14-19 13:00		Mar-14-19 13:15		Mar-14-19 13:20		Mar-14-19 13:25	
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30	
	Analyzed:	Mar-18-19 12:30		Mar-18-19 12:49		Mar-18-19 13:08		Mar-18-19 13:27		Mar-18-19 13:46		Mar-18-19 14:05	
	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	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00397	0.00397
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00	
	Analyzed:	Mar-18-19 14:54		Mar-18-19 15:12		Mar-18-19 15:18		Mar-18-19 15:24		Mar-18-19 15:30		Mar-18-19 15:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.4	5.03	28.2	5.00	42.0	4.99	54.0	4.95	261	4.95	43.5	4.96
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00	
	Analyzed:	Mar-18-19 10:58		Mar-18-19 11:55		Mar-18-19 12:14		Mar-18-19 12:34		Mar-18-19 12:54		Mar-18-19 13:14	
	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	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<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	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 617901

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI4

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

Date Received in Lab: Mon Mar-18-19 07:45 am
Report Date: 19-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617901-007		617901-008		617901-009		617901-010		617901-011		617901-012	
	Field Id:	PH4		PH4A		PH5		PH5A		PH6		PH6A	
	Depth:	.5- ft		1- ft		.5- ft		1- ft		.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-14-19 13:50		Mar-14-19 13:55		Mar-14-19 14:00		Mar-14-19 14:15		Mar-14-19 15:05		Mar-14-19 15:10	
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30	
	Analyzed:	Mar-18-19 14:24		Mar-18-19 14:43		Mar-18-19 15:02		Mar-18-19 15:27		Mar-18-19 16:41		Mar-18-19 17:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00402	0.00402	<0.00400	0.00400	<0.00399	0.00399	<0.00401	0.00401	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00	
	Analyzed:	Mar-18-19 15:54		Mar-18-19 16:01		Mar-18-19 16:07		Mar-18-19 16:13		Mar-18-19 16:19		Mar-18-19 16:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		179	4.98	40.6	5.00	56.5	4.95	79.5	4.95	58.7	4.95	553	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00	
	Analyzed:	Mar-18-19 13:34		Mar-18-19 13:53		Mar-18-19 14:13		Mar-18-19 14:32		Mar-18-19 15:30		Mar-18-19 15:50	
	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	172	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	36.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	208	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 617901

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI4

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

Date Received in Lab: Mon Mar-18-19 07:45 am
Report Date: 19-MAR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	617901-013		617901-014		617901-015			
	Field Id:	PH7		PH7A		FS1			
	Depth:	2- ft		4- ft		4- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-14-19 14:45		Mar-14-19 14:54		Mar-14-19 08:45			
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30			
	Analyzed:	Mar-18-19 17:19		Mar-18-19 17:38		Mar-18-19 17:57			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00403	0.00403		
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202		
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00			
	Analyzed:	Mar-18-19 16:43		Mar-18-19 17:01		Mar-18-19 17:07			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		554	4.96	90.1	5.00	137	4.99		
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00			
	Analyzed:	Mar-18-19 16:09		Mar-18-19 16:29		Mar-18-19 16:48			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<14.9	14.9	<15.0	15.0		
Diesel Range Organics (DRO)		30.0	14.9	<14.9	14.9	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<14.9	14.9	<15.0	15.0		
Total TPH		30.0	14.9	<14.9	14.9	<15.0	15.0		

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH1**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-001	Date Collected:	03.14.19 11.50	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.4**	5.03	mg/kg	03.18.19 14.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 10.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 10.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 10.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 10.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.18.19 10.58	
o-Terphenyl	84-15-1	89	%	70-135	03.18.19 10.58	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH1**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-001	Date Collected:	03.14.19 11.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 12.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 12.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.18.19 12.30	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 12.30	

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id: **PH1A** Matrix: Soil Date Received:03.18.19 07.45
Lab Sample Id: 617901-002 Date Collected: 03.14.19 12.10 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 03.18.19 12.00 Basis: Wet Weight
Seq Number: 3082553

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.2**	5.00	mg/kg	03.18.19 15.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 03.18.19 09.00 Basis: Wet Weight
Seq Number: 3082527

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 11.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 11.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 11.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 11.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 11.55	
o-Terphenyl	84-15-1	91	%	70-135	03.18.19 11.55	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH1A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-002	Date Collected:	03.14.19 12.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.18.19 12.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 12.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.18.19 12.49	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.18.19 12.49	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH2**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-003	Date Collected:	03.14.19 13.00	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.0**	4.99	mg/kg	03.18.19 15.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.18.19 12.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.18.19 12.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.18.19 12.14	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.18.19 12.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.18.19 12.14	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 12.14	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH2**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-003	Date Collected:	03.14.19 13.00	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.18.19 13.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 13.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.18.19 13.08	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.18.19 13.08	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id: **PH2A** Matrix: Soil Date Received:03.18.19 07.45

Lab Sample Id: 617901-004 Date Collected: 03.14.19 13.15 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.18.19 12.00 Basis: Wet Weight

Seq Number: 3082553

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.0**	4.95	mg/kg	03.18.19 15.24		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 03.18.19 09.00 Basis: Wet Weight

Seq Number: 3082527

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 12.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 12.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 12.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 12.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 12.34	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 12.34	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH2A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-004	Date Collected:	03.14.19 13.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.18.19 13.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.18.19 13.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 13.27	
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.18.19 13.27	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH3**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-005	Date Collected:	03.14.19 13.20	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**261**	4.95	mg/kg	03.18.19 15.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 12.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 12.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 12.54	
o-Terphenyl	84-15-1	91	%	70-135	03.18.19 12.54	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH3**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-005	Date Collected:	03.14.19 13.20	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 13.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 13.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.18.19 13.46	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 13.46	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH3A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-006	Date Collected:	03.14.19 13.25	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.5**	4.96	mg/kg	03.18.19 15.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 13.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 13.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 13.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 13.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.18.19 13.14	
o-Terphenyl	84-15-1	96	%	70-135	03.18.19 13.14	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH3A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-006	Date Collected:	03.14.19 13.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.18.19 14.05	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.18.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.18.19 14.05	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 14.05	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH4**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-007	Date Collected:	03.14.19 13.50	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**179**	4.98	mg/kg	03.18.19 15.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 13.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 13.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.18.19 13.34	
o-Terphenyl	84-15-1	89	%	70-135	03.18.19 13.34	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH4**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-007	Date Collected:	03.14.19 13.50	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.18.19 14.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.18.19 14.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 14.24	
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.18.19 14.24	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH4A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-008	Date Collected:	03.14.19 13.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.6**	5.00	mg/kg	03.18.19 16.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 13.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 13.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 13.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 13.53	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 13.53	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH4A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-008	Date Collected:	03.14.19 13.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.18.19 14.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 14.43	
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.18.19 14.43	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH5**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-009	Date Collected:	03.14.19 14.00	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.5**	4.95	mg/kg	03.18.19 16.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 14.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 14.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 14.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 14.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.18.19 14.13	
o-Terphenyl	84-15-1	92	%	70-135	03.18.19 14.13	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH5**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-009	Date Collected:	03.14.19 14.00	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.18.19 15.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 15.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.18.19 15.02	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 15.02	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH5A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-010	Date Collected:	03.14.19 14.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**79.5**	4.95	mg/kg	03.18.19 16.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 14.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 14.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 14.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 14.32	
o-Terphenyl	84-15-1	91	%	70-135	03.18.19 14.32	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH5A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-010	Date Collected:	03.14.19 14.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.18.19 15.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 15.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.18.19 15.27	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.18.19 15.27	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH6**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-011	Date Collected:	03.14.19 15.05	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**58.7**	4.95	mg/kg	03.18.19 16.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 15.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 15.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 15.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 15.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.18.19 15.30	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 15.30	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH6**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-011	Date Collected:	03.14.19 15.05	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 16.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.18.19 16.41	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 16.41	

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id: **PH6A** Matrix: Soil Date Received:03.18.19 07.45
Lab Sample Id: 617901-012 Date Collected: 03.14.19 15.10 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 03.18.19 12.00 Basis: Wet Weight
Seq Number: 3082553

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**553**	5.00	mg/kg	03.18.19 16.37		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 03.18.19 09.00 Basis: Wet Weight
Seq Number: 3082527

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 15.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**172**	15.0	mg/kg	03.18.19 15.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**36.0**	15.0	mg/kg	03.18.19 15.50		1
Total TPH	PHC635	**208**	15.0	mg/kg	03.18.19 15.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.18.19 15.50	
o-Terphenyl	84-15-1	101	%	70-135	03.18.19 15.50	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH6A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-012	Date Collected:	03.14.19 15.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 17.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 17.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.18.19 17.00	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 17.00	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH7**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-013	Date Collected:	03.14.19 14.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**554**	4.96	mg/kg	03.18.19 16.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.18.19 16.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**30.0**	14.9	mg/kg	03.18.19 16.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.18.19 16.09	U	1
Total TPH	PHC635	**30.0**	14.9	mg/kg	03.18.19 16.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.18.19 16.09	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 16.09	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH7**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-013	Date Collected:	03.14.19 14.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 17.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 17.19	
4-Bromofluorobenzene	460-00-4	126	%	70-130	03.18.19 17.19	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH7A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-014	Date Collected:	03.14.19 14.54	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**90.1**	5.00	mg/kg	03.18.19 17.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.18.19 16.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.18.19 16.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.18.19 16.29	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.18.19 16.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.18.19 16.29	
o-Terphenyl	84-15-1	100	%	70-135	03.18.19 16.29	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH7A**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-014	Date Collected:	03.14.19 14.54	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.18.19 17.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.18.19 17.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.18.19 17.38	
4-Bromofluorobenzene	460-00-4	139	%	70-130	03.18.19 17.38	**

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-015	Date Collected:	03.14.19 08.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.00	Basis:	Wet Weight
Seq Number:	3082553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	4.99	mg/kg	03.18.19 17.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 09.00	Basis:	Wet Weight
Seq Number:	3082527				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 16.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.18.19 16.48	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 16.48	

Certificate of Analytical Results 617901

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617901-015	Date Collected:	03.14.19 08.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.18.19 17.57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.18.19 17.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.18.19 17.57	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 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 617901

LT Environmental, Inc.

BEU DI4

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082553 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673780-1-BLK LCS Sample Id: 7673780-1-BKS LCSD Sample Id: 7673780-1-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	238	95	237	95	90-110	0	20	mg/kg	03.18.19 14:42	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082553 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617901-001 MS Sample Id: 617901-001 S MSD Sample Id: 617901-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.4	252	261	95	262	95	90-110	0	20	mg/kg	03.18.19 15:00	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082553 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617901-011 MS Sample Id: 617901-011 S MSD Sample Id: 617901-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.7	248	226	67	300	97	90-110	28	20	mg/kg	03.18.19 16:25	XF

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082527 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673810-1-BLK LCS Sample Id: 7673810-1-BKS LCSD Sample Id: 7673810-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1010	101	70-135	7	20	mg/kg	03.18.19 10:19	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1010	101	70-135	8	20	mg/kg	03.18.19 10:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		128		116		70-135	%	03.18.19 10:19
o-Terphenyl	93		112		99		70-135	%	03.18.19 10:19

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 617901

LT Environmental, Inc.

BEU DI4

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082527 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617901-001 MS Sample Id: 617901-001 S MSD Sample Id: 617901-001 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)	<7.98	997	929	93	954	96	70-135	3	20	mg/kg	03.18.19 11:17	
Diesel Range Organics (DRO)	8.45	997	924	92	954	95	70-135	3	20	mg/kg	03.18.19 11:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		109		70-135	%	03.18.19 11:17
o-Terphenyl	96		97		70-135	%	03.18.19 11:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082537 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673817-1-BLK LCS Sample Id: 7673817-1-BKS LCSD Sample Id: 7673817-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.110	109	0.109	109	70-130	1	35	mg/kg	03.18.19 10:38	
Toluene	<0.000458	0.101	0.118	117	0.115	115	70-130	3	35	mg/kg	03.18.19 10:38	
Ethylbenzene	<0.000568	0.101	0.108	107	0.106	106	70-130	2	35	mg/kg	03.18.19 10:38	
m,p-Xylenes	<0.00102	0.201	0.211	105	0.206	104	70-130	2	35	mg/kg	03.18.19 10:38	
o-Xylene	<0.000346	0.101	0.106	105	0.104	104	70-130	2	35	mg/kg	03.18.19 10:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		100		101		70-130	%	03.18.19 10:38
4-Bromofluorobenzene	106		100		102		70-130	%	03.18.19 10:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082537 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617901-001 MS Sample Id: 617901-001 S MSD Sample Id: 617901-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0866	87	0.0879	87	70-130	1	35	mg/kg	03.18.19 11:16	
Toluene	<0.000457	0.100	0.0933	93	0.0952	94	70-130	2	35	mg/kg	03.18.19 11:16	
Ethylbenzene	<0.000566	0.100	0.0859	86	0.0872	86	70-130	2	35	mg/kg	03.18.19 11:16	
m,p-Xylenes	<0.00102	0.200	0.168	84	0.172	85	70-130	2	35	mg/kg	03.18.19 11:16	
o-Xylene	0.000359	0.100	0.0846	84	0.0868	86	70-130	3	35	mg/kg	03.18.19 11:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	03.18.19 11:16
4-Bromofluorobenzene	108		112		70-130	%	03.18.19 11:16

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)

Work Order No: 617901

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Project Manager:	Adrian Baker	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:	
Phone:	432.704.5178	Email:	Abaker@LTenv.com

Work Order Comments

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

Project Name:	BEUDI 4	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5162	Rush: 3/14	
Sampler's Name:	Garrett Green	Due Date: 3/15	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.0/1.9	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH1	S	3/14	1150	.5'	1	X	X	X
PH1a	S		1210	1'	1	X	X	X
PH2	S		1300	.5'	1	X	X	X
PH2a	S		1315	1'	1	X	X	X
PH3	S		1370	.5'	1	X	X	X
PH3a	S		1375	1'	1	X	X	X
PH4	S		1350	.5'	1	X	X	X
PH4a	S		1355	1'	1	X	X	X
PH5	S		1400	.5'	1	X	X	X
PH5a	S	↓	1415	1'	1	X	X	X

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			3/14/2019 1530	2		3/18/19 0745
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

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Final 1.000

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Chain of Custody

Work Order No: 617901

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 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Litrell
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:	
Phone:	432.704.5178	Email:	Abaker@ltenv.com

Work Order Comments

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

Project Name:	BEU DI 4	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5162	Rush: 3/14	
Sampler's Name:	Garrett Green	Due Date: 3/15	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.0/1.9	Thermometer ID	R8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH6	S	3/14	1505	.5'	X	X	X	X
PH6a	S		1510	1'	1	X	X	X
PH7	S		1465	2'	1	X	X	X
PH7a	S		1455	4'	1	X	X	X
FS1	S	↓	0845	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			3/14/19 1530			3/18/19
2						0745
3						
4						
5						
6						

Revised Date 051418 Rev. 2018.1

7747 7018 0151

Final 1.000

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/18/2019 07:45:00 AM

Work Order #: 617901

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#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: 03/18/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 03/18/2019

Kalei Stout

Analytical Report 617912

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU DI4

20-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)

20-MAR-19

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

Reference: XENCO Report No(s): **617912**
BEU DI4
Project Address: ---

Adrian Baker:

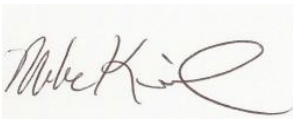
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 617912. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 617912 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,



Mike Kimmel
Client Services Manager

Sample Cross Reference 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH8	S	03-15-19 09:10	2 ft	617912-001
PH8A	S	03-15-19 10:30	5 ft	617912-002
PH9	S	03-15-19 11:35	1 ft	617912-003
PH9A	S	03-15-19 11:45	2 ft	617912-004
PH10	S	03-15-19 12:45	1 ft	617912-005
PH10A	S	03-15-19 12:55	2 ft	617912-006
PH11	S	03-15-19 14:45	.5 ft	617912-007
PH11A	S	03-15-19 15:00	1 ft	617912-008
PH12	S	03-15-19 13:30	.5 ft	617912-009
PH12A	S	03-15-19 13:40	1 ft	617912-010
PH13	S	03-15-19 14:10	.5 ft	617912-011
PH13A	S	03-15-19 14:40	1 ft	617912-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: BEU DI4

Project ID: ---
Work Order Number(s): *617912*

Report Date: *20-MAR-19*
Date Received: *03/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082541 Inorganic Anions by EPA 300
Lab Sample ID 617912-002 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: 617912-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3082547 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 617912-002.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 617912-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene 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: 617912-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.
The Laboratory Control Sample for Benzene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 617912

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI4

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

Date Received in Lab: Mon Mar-18-19 09:26 am
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617912-001		617912-002		617912-003		617912-004		617912-005		617912-006	
	Field Id:	PH8		PH8A		PH9		PH9A		PH10		PH10A	
	Depth:	2- ft		5- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 09:10		Mar-15-19 10:30		Mar-15-19 11:35		Mar-15-19 11:45		Mar-15-19 12:45		Mar-15-19 12:55	
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00	
	Analyzed:	Mar-19-19 08:05		Mar-19-19 08:24		Mar-19-19 08:43		Mar-19-19 09:02		Mar-19-19 09:21		Mar-19-19 09:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.00202	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402	<0.00399	0.00399	<0.00401	0.00401	0.00401	0.00400	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.00401	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	0.00603	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15	
	Analyzed:	Mar-18-19 18:31		Mar-18-19 19:38		Mar-18-19 18:37		Mar-18-19 18:43		Mar-18-19 18:49		Mar-18-19 19:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1510	25.0	251	5.00	3460	24.9	72.0	4.95	2550	24.8	203	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00	
	Analyzed:	Mar-19-19 17:18		Mar-19-19 18:17		Mar-19-19 18:37		Mar-19-19 18:56		Mar-19-19 19:16		Mar-19-19 19:35	
	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	23.6	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	28.2	15.0	757	15.0	256	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	184	15.0	61.4	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	28.2	15.0	965	15.0	317	15.0

Certificate of Analysis Summary 617912

LT Environmental, Inc., Arvada, CO

Project Name: BEU DI4

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

Date Received in Lab: Mon Mar-18-19 09:26 am
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617912-007		617912-008		617912-009		617912-010		617912-011		617912-012	
	Field Id:	PH11		PH11A		PH12		PH12A		PH13		PH13A	
	Depth:	.5- ft		1- ft		.5- ft		1- ft		.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 14:45		Mar-15-19 15:00		Mar-15-19 13:30		Mar-15-19 13:40		Mar-15-19 14:10		Mar-15-19 14:40	
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00		Mar-18-19 16:00	
	Analyzed:	Mar-19-19 09:59		Mar-19-19 10:18		Mar-19-19 10:37		Mar-19-19 10:56		Mar-19-19 14:37		Mar-19-19 14:56	
	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	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00397	0.00397	<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15		Mar-18-19 12:15	
	Analyzed:	Mar-18-19 19:14		Mar-18-19 19:20		Mar-18-19 19:26		Mar-18-19 19:32		Mar-18-19 19:56		Mar-18-19 20:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		239	25.1	119	25.2	251	24.8	236	49.5	238	24.9	166	25.0
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00		Mar-18-19 14:00	
	Analyzed:	Mar-19-19 19:55		Mar-19-19 20:15		Mar-19-19 20:35		Mar-19-19 20:54		Mar-19-19 21:53		Mar-19-19 22:13	
	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	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH8**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-001	Date Collected:	03.15.19 09.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1510**	25.0	mg/kg	03.18.19 18.31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 17.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 17.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 17.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 17.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	03.19.19 17.18	
o-Terphenyl	84-15-1	111	%	70-135	03.19.19 17.18	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH8**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-001	Date Collected:	03.15.19 09.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.19.19 08.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 08.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.19.19 08.05	
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.19.19 08.05	

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH8A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-002	Date Collected:	03.15.19 10.30	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**251**	5.00	mg/kg	03.18.19 19.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 18.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 18.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 18.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 18.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.19.19 18.17	
o-Terphenyl	84-15-1	103	%	70-135	03.19.19 18.17	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH8A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-002	Date Collected:	03.15.19 10.30	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.19.19 08.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.19.19 08.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.19.19 08.24	
4-Bromofluorobenzene	460-00-4	144	%	70-130	03.19.19 08.24	**

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH9**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-003	Date Collected:	03.15.19 11.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3460**	24.9	mg/kg	03.18.19 18.37		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 18.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 18.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 18.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.19.19 18.37	
o-Terphenyl	84-15-1	97	%	70-135	03.19.19 18.37	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH9**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-003	Date Collected:	03.15.19 11.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.19.19 08.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 08.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.19 08.43	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.19.19 08.43	

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH9A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-004	Date Collected:	03.15.19 11.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.0**	4.95	mg/kg	03.18.19 18.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 18.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	**28.2**	15.0	mg/kg	03.19.19 18.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 18.56	U	1
Total TPH	PHC635	**28.2**	15.0	mg/kg	03.19.19 18.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.19.19 18.56	
o-Terphenyl	84-15-1	95	%	70-135	03.19.19 18.56	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH9A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-004	Date Collected:	03.15.19 11.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.19.19 09.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 09.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 09.02	
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.19.19 09.02	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-005	Date Collected:	03.15.19 12.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2550**	24.8	mg/kg	03.18.19 18.49		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**23.6**	15.0	mg/kg	03.19.19 19.16		1
Diesel Range Organics (DRO)	C10C28DRO	**757**	15.0	mg/kg	03.19.19 19.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**184**	15.0	mg/kg	03.19.19 19.16		1
Total TPH	PHC635	**965**	15.0	mg/kg	03.19.19 19.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	03.19.19 19.16	
o-Terphenyl	84-15-1	123	%	70-135	03.19.19 19.16	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-005	Date Collected:	03.15.19 12.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 09.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 09.21	U	1
Ethylbenzene	100-41-4	**0.00202**	0.00200	mg/kg	03.19.19 09.21		1
m,p-Xylenes	179601-23-1	**0.00401**	0.00400	mg/kg	03.19.19 09.21		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 09.21	U	1
Total Xylenes	1330-20-7	**0.00401**	0.00200	mg/kg	03.19.19 09.21		1
Total BTEX		**0.00603**	0.00200	mg/kg	03.19.19 09.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.19.19 09.21	
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.19.19 09.21	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-006	Date Collected:	03.15.19 12.55	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**203**	5.00	mg/kg	03.18.19 19.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 19.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**256**	15.0	mg/kg	03.19.19 19.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**61.4**	15.0	mg/kg	03.19.19 19.35		1
Total TPH	PHC635	**317**	15.0	mg/kg	03.19.19 19.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.19.19 19.35	
o-Terphenyl	84-15-1	106	%	70-135	03.19.19 19.35	

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-006	Date Collected:	03.15.19 12.55	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.19.19 09.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 09.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 09.40	
4-Bromofluorobenzene	460-00-4	124	%	70-130	03.19.19 09.40	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-007	Date Collected:	03.15.19 14.45	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**239**	25.1	mg/kg	03.18.19 19.14		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 19.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 19.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 19.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 19.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.19.19 19.55	
o-Terphenyl	84-15-1	101	%	70-135	03.19.19 19.55	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-007	Date Collected:	03.15.19 14.45	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.19.19 09.59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.19.19 09.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 09.59	
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 09.59	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-008	Date Collected:	03.15.19 15.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**119**	25.2	mg/kg	03.18.19 19.20		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 20.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.19.19 20.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 20.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.19.19 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.19.19 20.15	
o-Terphenyl	84-15-1	95	%	70-135	03.19.19 20.15	

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LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-008	Date Collected:	03.15.19 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.19.19 10.18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.19.19 10.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 10.18	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 10.18	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-009	Date Collected:	03.15.19 13.30	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**251**	24.8	mg/kg	03.18.19 19.26		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 20.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 20.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 20.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 20.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.19.19 20.35	
o-Terphenyl	84-15-1	93	%	70-135	03.19.19 20.35	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-009	Date Collected:	03.15.19 13.30	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 10.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 10.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 10.37	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.19.19 10.37	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-010	Date Collected:	03.15.19 13.40	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**236**	49.5	mg/kg	03.18.19 19.32		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.19.19 20.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.19.19 20.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.19.19 20.54	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.19.19 20.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.19.19 20.54	
o-Terphenyl	84-15-1	96	%	70-135	03.19.19 20.54	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-010	Date Collected:	03.15.19 13.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.19.19 10.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.19.19 10.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	03.19.19 10.56	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 10.56	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH13**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-011	Date Collected:	03.15.19 14.10	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	24.9	mg/kg	03.18.19 19.56		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 21.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 21.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 21.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 21.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.19.19 21.53	
o-Terphenyl	84-15-1	104	%	70-135	03.19.19 21.53	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH13**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-011	Date Collected:	03.15.19 14.10	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.19.19 14.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.19.19 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 14.37	
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.19.19 14.37	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH13A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-012	Date Collected:	03.15.19 14.40	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.18.19 12.15	Basis:	Wet Weight
Seq Number:	3082541				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**166**	25.0	mg/kg	03.18.19 20.02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 22.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 22.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 22.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.19.19 22.13	
o-Terphenyl	84-15-1	104	%	70-135	03.19.19 22.13	

Certificate of Analytical Results 617912

LT Environmental, Inc., Arvada, CO

BEU DI4

Sample Id:	**PH13A**	Matrix:	Soil	Date Received:	03.18.19 09.26
Lab Sample Id:	617912-012	Date Collected:	03.15.19 14.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 16.00	Basis:	Wet Weight
Seq Number:	3082547				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.19.19 14.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.19.19 14.56	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.19.19 14.56	

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 617912

LT Environmental, Inc.

BEU DI4

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082541 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617903-006 MS Sample Id: 617903-006 S MSD Sample Id: 617903-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.28	250	243	96	241	95	90-110	1	20	mg/kg	03.18.19 18:19	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082541 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617912-002 MS Sample Id: 617912-002 S MSD Sample Id: 617912-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	251	250	408	63	468	87	90-110	14	20	mg/kg	03.18.19 19:44	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082656 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673812-1-BLK LCS Sample Id: 7673812-1-BKS LCSD Sample Id: 7673812-1-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	1090	109	1100	110	70-135	1	20	mg/kg	03.19.19 16:39	
Diesel Range Organics (DRO)	<8.13	1000	1130	113	1120	112	70-135	1	20	mg/kg	03.19.19 16:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		129		130		70-135	%	03.19.19 16:39
o-Terphenyl	107		114		118		70-135	%	03.19.19 16:39

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082656 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617912-001 MS Sample Id: 617912-001 S MSD Sample Id: 617912-001 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)	<7.97	996	1010	101	1010	101	70-135	0	20	mg/kg	03.19.19 17:38	
Diesel Range Organics (DRO)	8.70	996	1030	103	1040	103	70-135	1	20	mg/kg	03.19.19 17:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		121		70-135	%	03.19.19 17:38
o-Terphenyl	104		102		70-135	%	03.19.19 17:38

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 617912

LT Environmental, Inc.

BEU DI4

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

Seq Number: 3082547 Matrix: Solid Date Prep: 03.18.19

MB Sample Id: 7673824-1-BLK LCS Sample Id: 7673824-1-BKS LCSD Sample Id: 7673824-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.107	107	0.103	104	70-130	4	35	mg/kg	03.19.19 06:12	
Toluene	<0.000457	0.100	0.113	113	0.110	111	70-130	3	35	mg/kg	03.19.19 06:12	
Ethylbenzene	<0.000567	0.100	0.104	104	0.101	102	70-130	3	35	mg/kg	03.19.19 06:12	
m,p-Xylenes	<0.00102	0.201	0.200	100	0.194	97	70-130	3	35	mg/kg	03.19.19 06:12	
o-Xylene	<0.000346	0.100	0.102	102	0.100	101	70-130	2	35	mg/kg	03.19.19 06:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		102		70-130	%	03.19.19 06:12
4-Bromofluorobenzene	108		104		106		70-130	%	03.19.19 06:12

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

Seq Number: 3082547 Matrix: Soil Date Prep: 03.18.19

Parent Sample Id: 617912-001 MS Sample Id: 617912-001 S MSD Sample Id: 617912-001 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	0.0996	0.0641	64	0.0686	68	70-130	7	35	mg/kg	03.19.19 06:50	X
Toluene	<0.000454	0.0996	0.0751	75	0.0785	78	70-130	4	35	mg/kg	03.19.19 06:50	
Ethylbenzene	<0.000563	0.0996	0.0920	92	0.0942	93	70-130	2	35	mg/kg	03.19.19 06:50	
m,p-Xylenes	<0.00101	0.199	0.179	90	0.182	90	70-130	2	35	mg/kg	03.19.19 06:50	
o-Xylene	<0.000343	0.0996	0.0886	89	0.0898	89	70-130	1	35	mg/kg	03.19.19 06:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	03.19.19 06:50
4-Bromofluorobenzene	110		111		70-130	%	03.19.19 06:50

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: 617912

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)

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Project Manager:	Adrian Baker	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:	
Phone:	432.704.5178	Email:	Ggreen@Ltenv.com /ABaker@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:	BEUDI 4	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5162	Rush: 3/18	
Sampler's Name:	Garrett Green	Due Date: 3/19	

SAMPLE RECEIPT			
Temperature (°C):	3.1/3.0	Temp Blank: Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	10
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)
PH8	S	3/15/2019	0910	2'	1	X	X	X
PH8a	S		1030	5'	1	X	X	X
PH9	S		1135	1'	1	X	X	X
PH9a	S		1145	2'	1	X	X	X
PH10	S		1245	1'	1	X	X	X
PH10a	S		1255	2'	1	X	X	X
PH11	S		1445	.5'	1	X	X	X
PH11a	S		1500	1'	1	X	X	X
PH12	S		1330	.5'	1	X	X	X
PH12a	S	↓	1340	1'	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			3/15/2019 1800	2	3/18/19 0924	03/14/2019 17:00
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

Work Order No: 617912

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 2 of 2

Project Manager:	Adrian Baker	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:	
Phone:	432.704.5178	Email:	Ggreen@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:	BEUDI 4	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5162	Rush: 3/18	
Sampler's Name:	Garrett Green	Due Date: 3/19	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3.1 / 2.0	Thermometer ID:	IR8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes ~~No~~ N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH13	S	3/15/19	1310	5'	1	X	X	X
PH13a	S	3/15/19	1340	1'	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			3/15/2019 / 1800	2		03/16/2019 17:00
3				4	3/18/19 0924	
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: 03/18/2019 09:26:00 AM

Work Order #: 617912

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 03/18/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 03/18/2019

Kalei Stout

ATTACHMENT 3: SOIL SAMPLE LOGS

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

Identifier:	Date:
PH1	3/14/2019
Project Name:	**RP Number:**
BEUDI 4	5162
Logged By: GG	**Method:** Hydrovac
Lat/Long:	**Field Screening:** LTS/PID
Hole Diameter:	**Total Depth:** ~~2~~ 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1150 D	180	.3	N	1	0	.5'		caliche/gravel
1210 D	180	.2	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH2	3/14
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HU
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1300 D	180	1.1	N	1	0	.5'		caliche/gravel
1315 D	180	0.6	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
BH3	3/14
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HV
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** ~~2'~~ 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1320 D	180	0.1	N	1	0	.5'		caliche/gravel
1325 D	180	0.1	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH4	3/14
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HV
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CTS/PID

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1350	D	180	0.2	N	1	0	.5'		caliche/gravel
1355	D	180	0.1	N	2	1	1'		caliche/gravel
						2			
						3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

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Identifier:	Date:
PH5	3/14
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HV
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1400 D	180	0.0	N	1	0	.5'		caliche/gravel
1415 D	180	0.0	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Identifier:	Date:
PH6	3/14
Project Name:	**RP Number:**
BF UNIT 4	5162
Logged By: GG	**Method:** ~~HA~~ HV
Hole Diameter:	**Total Depth:** 2' 1'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: LTS/PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1505 D	450	0.1	N	1	0	.5'		caliche/gravel
1510 D	180	0.0	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Identifier:	Date:
PH7	3/14
Project Name:	**RP Number:**
BF UNIT	5162
Logged By: CG	**Method:** HV
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** 4

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1445	D	723	1.9	N	1	0	1'		caliche/gravel
1455	D	857	1.5	N	2	1	2'		caliche/gravel
1510	D	723		N	3	2	3'		caliche/gravel
1540	D	180		N	4	3	4'		caliche
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

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Identifier:	Date:
PH8	3/15
Project Name: BFU DI 4	RP Number: 5162
Logged By: GG	Method: HV
Lat/Long:	Field Screening: CTS/PID
Hole Diameter:	Total Depth: 5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0910		1363	10.1		1	0	2'		caliche
930		1363	9.2		2	1	3'		caliche
1000		1273	0.9		3	2	4		caliche
1050		180	0.9		4	3	5		caliche
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

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Identifier:	Date:
PH9	3/15
Project Name:	**RP Number:**
BEU DI 4	5162
Logged By: GG	**Method:** HV
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** 2'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1135	D	3468	1.2	V	1	0	1'		caliche/gravel
1145	D	180	1.5	N	2	1	2'		caliche/gravel
						2			
						3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

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Identifier: PH10	Date: 3/15
Project Name: BEUDI 4	RP Number: 5162
Logged By: GG	Method: HV
Lat/Long:	Field Screening: CTS/PID
Hole Diameter:	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1245 D	1940	0.8	N	1	0	1'		caliche/gravel
1255 D	180	0.1	N	2	1	2'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH 11	3/15
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HV
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CTS/PID

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1445	D	180	1.5	N	1	0	.5'		caliche/gravel
1500	D	K180	1.0	N	2	1	1'		caliche/gravel
						2			
						3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

LT Environmental, Inc.
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Identifier:	Date:
PH12	3/15
Project Name:	**RP Number:**
BEUDI 4	5162
Logged By: GG	**Method:** HV
Hole Diameter:	**Total Depth:** 1

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CTS / PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1330 D	<180	1.7	N	1	0	.5'		caliche / gravel
1340 D	<180	1.7	N	2	1	1'		caliche/gravel
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH13	3/15
Project Name:	**RP Number:**
BEUDI4	5162
Logged By: GG	**Method:** HV
Lat/Long:	**Field Screening:** CTS/PID
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1410	D	180	1.4	N	1	0	.5'		caliche/gravel
1425	D	160	1.2	N	2	1	1'		caliche/gravel
						2			
						3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

View south showing piping density in release area.

Project: 012918201	XTO Energy, Inc. Big Eddy Unit DI #4	LTE Advancing Opportunity
December 27, 2018	Photographic Log	

View northeast of free-water knockout tanks and soil impacts around piping.

Project: 012918201	XTO Energy, Inc. Big Eddy Unit DI #4	LTE Advancing Opportunity
December 27, 2018	Photographic Log	

View south of southeastern excavation.

Project: 012918201	XTO Energy, Inc. Big Eddy Unit DI #4	LTE Advancing Opportunity
March 14, 2019	Photographic Log	