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

October 25, 2019

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

RE: Closure Request
Big Eddy Unit 33 Tank Battery
Remediation Permit Number 2RP-1905
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Big Eddy Unit 33 Tank Battery (Site) in Unit P, Section 4, Township 20 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of produced water at the Site.

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

RELEASE BACKGROUND

On August 21, 2013, the truck load line developed a leak due to internal corrosion. Approximately 80 bbls of produced water were released within the tank battery containment berm. Approximately 1,650 square feet within the containment was affected by the release. A vacuum truck recovered approximately 60 bbls of free-standing fluid. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on September 10, 2013, and was assigned Remediation Permit (RP) Number 2RP-1905 (Attachment 1).

Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based

on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release event.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is NM OSE Well 00520, located approximately 4,140 feet southeast of the Site. The water well has a depth to groundwater of 130 feet and a total depth of 280 feet. Ground surface elevation at the water well location is 3,481 feet above mean sea level (AMSL), which is approximately 6 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 1,659 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

During July 2018, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed in the tank battery containment release area. An LTE scientist collected five preliminary soil samples (SS01 through SS05) within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet or 1.5 feet bgs. On February 20, 2019, LTE personnel returned to the site to collect additional soil samples from four

of the preliminary soil sample locations to assess the vertical extent of impacted soil. Soil samples SS02A through SS05A were collected from a depth of 4 bgs at the SS02 through SS05 soil sample locations.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The soil sample locations are depicted on Figure 2.

Between July 2018 and September 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities as indicated by visual observations and field screening activities.

Boreholes and potholes were advanced via hand auger or backhoe at twelve locations on the well pad within and around the release extent. Boreholes BH01 through BH05 and potholes PH01 through PH07 were advanced to depths ranging from 2 feet to 8 feet bgs. Two delineation soil samples were collected from each borehole and pothole from depths ranging from 1 foot to 8 feet bgs. Soil from the boreholes and potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for selected boreholes and potholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by visual observations, field screening results, and potholing activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Based on field screening results, and/or the presence of active production equipment, several separate excavations were completed. The excavation depths ranged from 2 feet to 16 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW14 were collected from the sidewalls of the excavations from depths ranging from the ground surface to 11.5 feet bgs. Composite soil samples FS01 through FS07, FS03A/FS03B, and FS04A/FS04B were collected from the floors of the excavations from depths ranging from 2 feet to 16 feet bgs. The excavation extents and excavation soil sample locations are depicted on Figure 4.

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

The combined excavations measured approximately 1,140 square feet in area and were completed to depths ranging from 2 feet bgs to 16 feet bgs. A total of approximately 275 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 and SS02/SS02A through SS05/SS05A. Based on visible surface staining and field screening results, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for the delineation soil samples, collected from boreholes BH01, BH03 through BH05, and potholes PH01 through PH07, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation soil sample BH02, collected at 1 foot bgs, indicated that GRO/DRO concentrations exceeded the Closure Criteria; subsequent soil sample BH02A, collected at 2 feet bgs, was compliant with the Closure Criteria. Impacted soil was excavated, and laboratory analytical results for excavation soil samples SW01 through SW14, FS01 through FS07, FS03A/FS03B, and FS04A/FS04B indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the release area to address impacts to soil resulting from a historical release of produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed in and around the release extent. Laboratory analytical results for the final delineation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-1905. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-1905)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

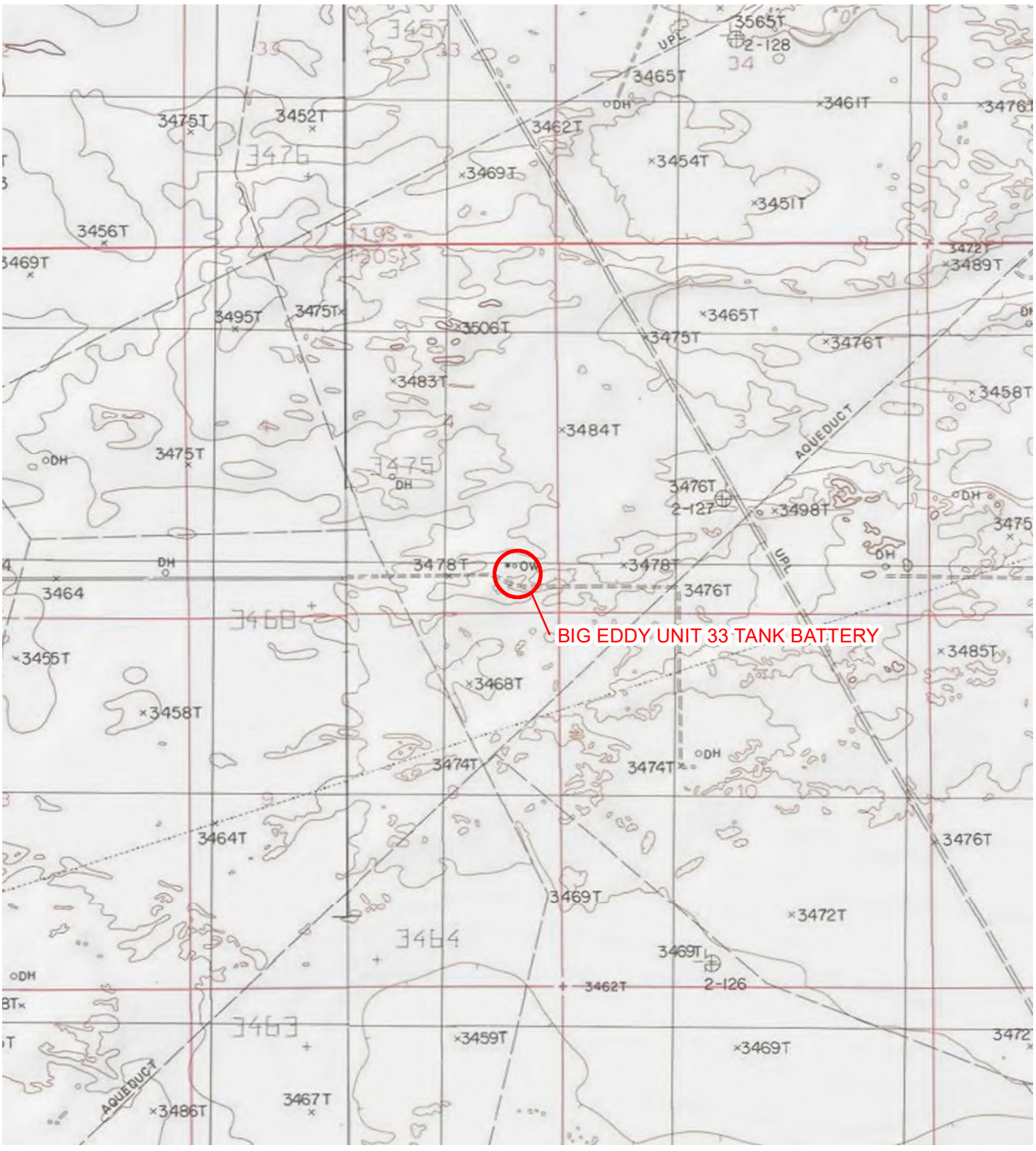

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-1905

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT 33 TANK BATTERY
UNIT P SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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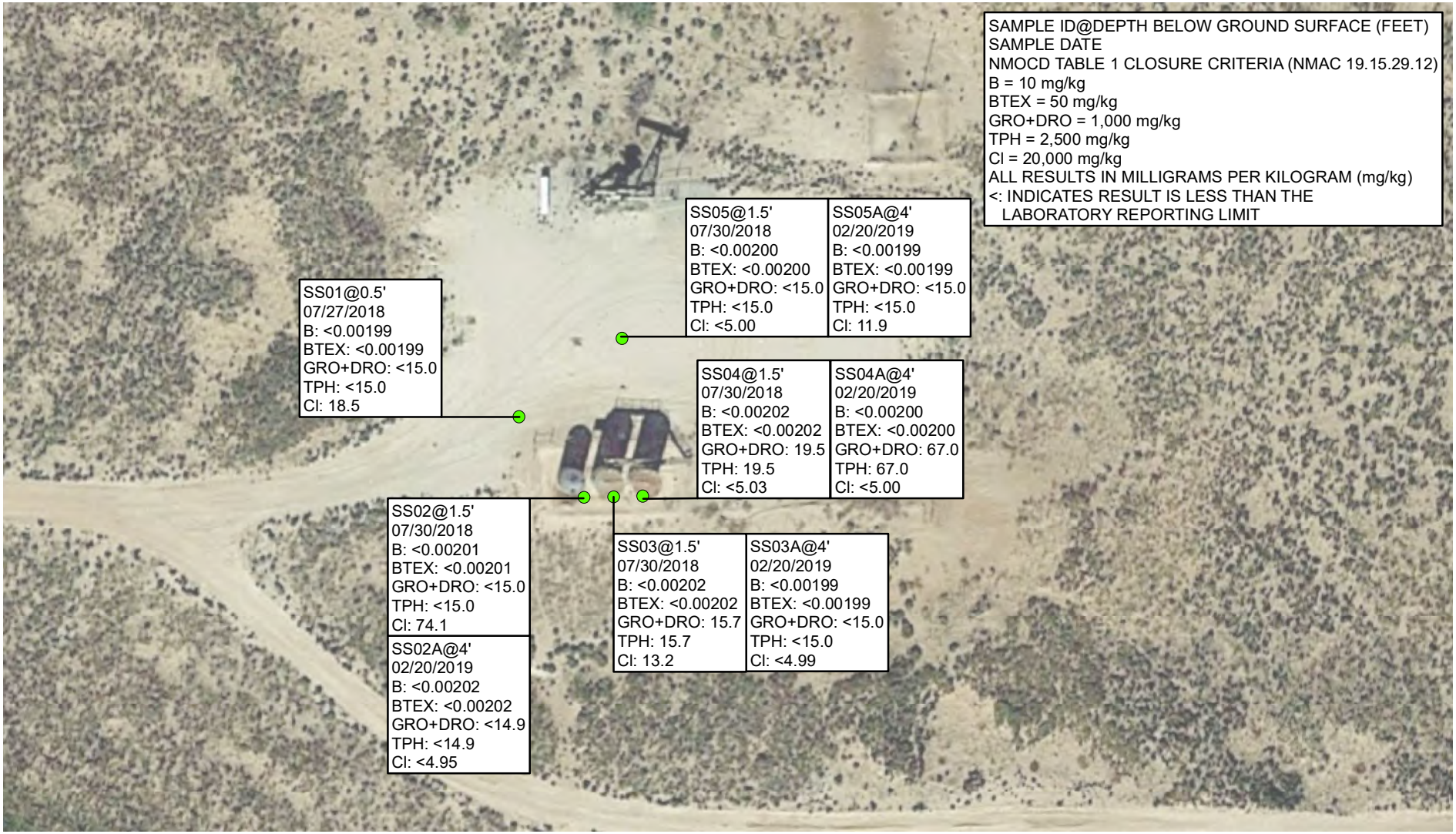

LEGEND

PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-1905

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 33 TANK BATTERY
UNIT P SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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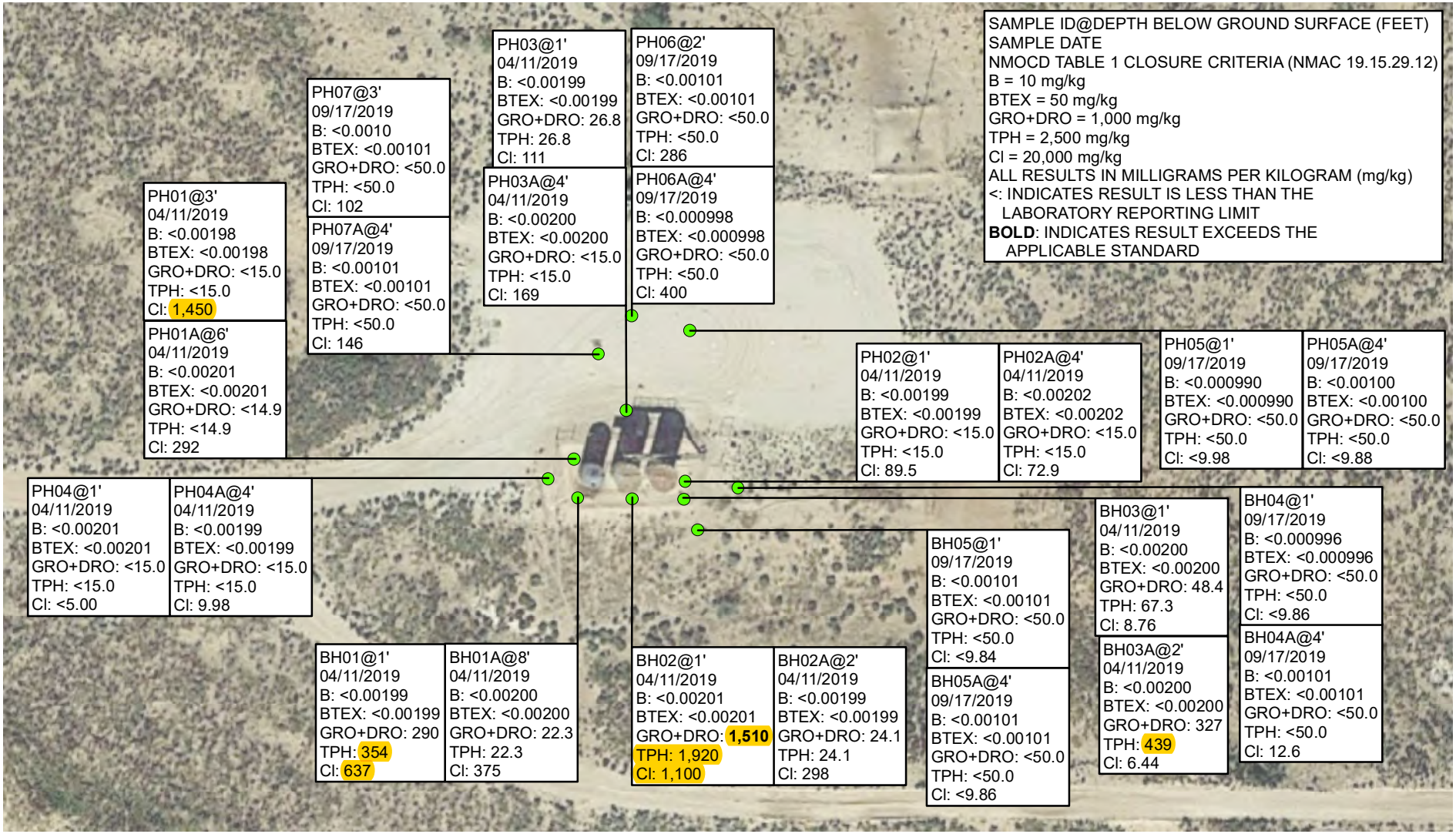

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-1905

0 60 120
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 33 TANK BATTERY
UNIT P SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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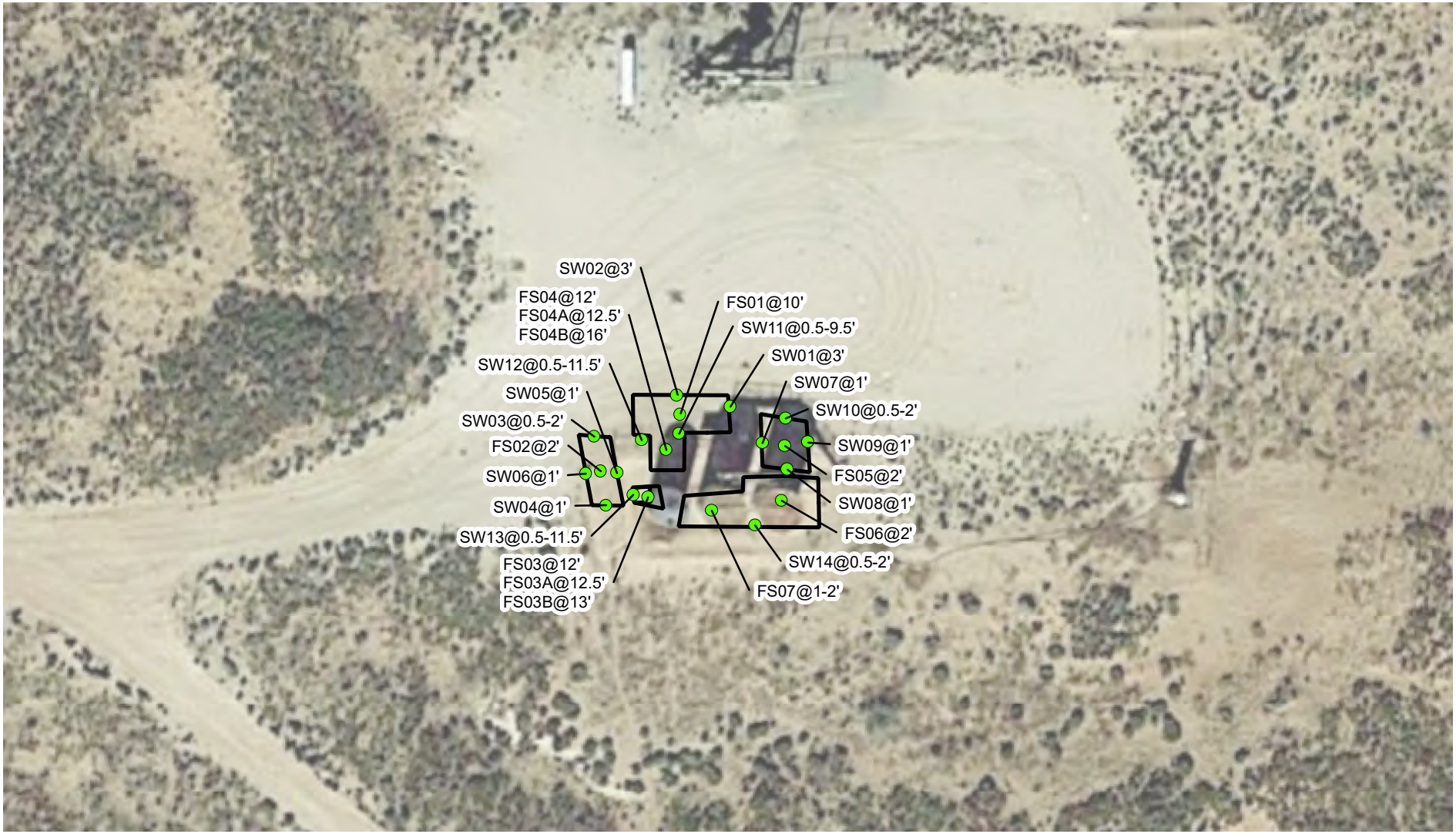

LEGEND

EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 40 80

Feet

N

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-1905

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 33 TANK BATTERY
UNIT P SEC 4 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 33 TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-1905
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	07/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	18.5
SS02	1.5	07/30/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	74.1
SS03	1.5	07/30/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	15.7	<15.0	<15.0	15.7	15.7	13.2
SS04	1.5	07/30/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	19.5	<14.9	19.5	19.5	<5.03
SS05	1.5	07/30/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS02A	4	02/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
SS03A	4	02/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS04A	4	02/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	67.0	<15.0	67.0	67.0	<5.00
SS05A	4	02/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	11.9
BH01	1	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	290	64.3	290	354	637
BH01A	8	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	22.3	<15.0	22.3	22.3	375
BH02	1	04/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	1,510	414	**1,510**	1,924	1,100
BH02A	2	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	24.1	<15.0	24.1	24.1	298
BH03	1	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	48.4	18.9	48.4	67.3	8.76
BH03A	2	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	327	112	327	439	6.44
BH04	1	09/17/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.0	<50.0	<50.0	<50.0	<50.0	<9.86
BH04A	4	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	12.6
BH05	1	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	<9.84
BH05A	4	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	<9.86
PH01	3	04/11/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,450
PH01A	6	04/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	292
PH02	1	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	89.5
PH02A	4	04/11/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	72.9
PH03	1	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	26.8	<15.0	<15.0	26.8	26.8	111
PH03A	4	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	169
PH04	1	04/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH04A	4	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	9.98

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 33 TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-1905
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH05	1	09/17/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.0	<50.0	<50.0	<50.0	<50.0	<9.98
PH05A	4	09/17/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	<9.88
PH06	2	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	286
PH06A	4	09/17/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.0	<50.0	<50.0	<50.0	<50.0	400
PH07	3	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	102
PH07A	4	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	146
SW01	3	07/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SW02	3	07/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	<5.01
SW03	0.5-2	09/17/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	19.9
SW04	1	07/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	20.7	<15.0	<15.0	20.7	20.7	40.1
SW05	1	07/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	27.8	<15.0	<15.0	27.8	27.8	310
SW06	1	07/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	212
SW07	1	07/30/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	275
SW08	1	07/30/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	205
SW09	1	07/30/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	511
SW10	0.5-2	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	<9.88
SW11	0.5-9.5	09/17/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.0	<50.0	<50.0	<50.0	<50.0	115
SW12	0.5-11.5	09/17/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.0	<50.0	<50.0	<50.0	<50.0	204
SW13	11.5	09/17/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	124
SW14	0.5-2	09/18/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.0	253	<50.0	253	253	25.3
FS01	10	07/27/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	84.1
FS02	2	07/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	25.3	<15.0	<15.0	25.3	25.3	113
FS03	12	07/30/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,970
FS03A	12.5	09/17/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.0	<50.0	<50.0	<50.0	<50.0	108

TABLE 1
SOIL ANALYTICAL RESULTS

BIG EDDY UNIT 33 TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-1905
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS03B	13	09/17/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.0	<50.0	<50.0	<50.0	<50.0	111
FS04	12	07/30/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	32.9	<15.0	32.9	32.9	729
FS04A	12.5	09/17/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	455
FS04B	16	09/17/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.0	<50.0	<50.0	<50.0	<50.0	1,290
FS05	2	07/30/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	15.8	<15.0	<15.0	15.8	15.8	312
FS06	2	09/18/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.0	91.9	<50.0	91.9	91.9	95.2
FS07	1-2	09/18/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	83.2	<50.0	83.2	83.2	31.6
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-1905)

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

State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED
SEP 10 2013
NMOCD ARTESIA

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nJMW1325536299

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Big Eddy Unit 33 Tank Battery	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-20369

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	4	20S	31E					

Latitude N 32.596782 **Longitude** W 103.86772

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 80 Bbls	Volume Recovered: 60 Bbls
Source of Release: 4" truck load line	Date and Hour of Occurrence: 8/21/13, Time unknown	Date and Hour of Discovery: 8/21/13 Time 11:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour 8/21/13 at 5:40 p.m.	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The truck loaded developed a leak due to internal corrosion, the tank valve was shut and the load line was replaced.

Describe Area Affected and Cleanup Action Taken.*
The spill stayed inside the earthen containment around the tank location, the bermed area measured approximately 30 ft. by 55 ft. Approximately 1650 sq. ft. of containment area was impacted by the release. All of the free product was removed at the time of discovery. A remediation plan will be submitted to the NMOCD. The remediation will comply with the NMOCD and BLM guidelines for spill remediation

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

Signature: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 9/10/13 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: SEP 11 2013 Expiration Date:

Conditions of Approval:
Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: October 11, 2013

Attached ☐

2RP-1905

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-1905
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-1905
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.596782 Longitude W 103.86772
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Big Eddy Unit 33 Tank Battery	Site Type: Production Well Facility
Date Release Discovered: 8/21/2013	API# *(if applicable):* 30-015-20369

Unit Letter	Section	Township	Range	County
P	4	20S	31E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 80	Volume Recovered (bbls): 60
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
The truck load line developed a leak due to internal corrosion. The spill stayed inside the earthen containment around the tank location, the bermed area measured approximately 30 ft. by 55 ft. Approximately 1650 sq. ft. of containment area was impacted by the release. All of the free product was removed at the time of discovery.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-1905
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Volume released was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Tony Savoie to NMOCD on 8/21/2013 at 5:40 pm.	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/15/2019

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-1905
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-1905
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/2019

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

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-1905
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Brittany Hall Date: 3/10/2023

Printed Name: Brittany Hall Title: Environmental Specialist

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

Identifier:	Date:
BH04	9/17/19
Project Name:	**RP Number:**
BEU 33 Tank Battery	2RP-1905
Logged By: Anna Byers	**Method:** Hand Auger
Hole Diameter: 2.5"	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Collector
Field Screening: PID + HACH Cl- strips

Comments: 1:4 dilution factor for Cl- test

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	Ø	N	BH04	1	1.0'	SP	moist, brown poorly graded sand (c.) non-plastic
M	<128	Ø	N		2	2.0'	SP	
					3			
M	<128	Ø	N	BH04A	4	4.0'	SP	
								TOT DEPTH
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.

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

Compliance · Engineering · Remediation

Identifier:	Date:
BH05	9/17/19
Project Name: BEU 33 Tank Battery	**RP Number:** 2RP-1905
Logged By: Anna Byers	**Method:** Hand Auger
Hole Diameter: 2.5"	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Collector

Field Screening: PID & Hach Cl- Strips

Comments: 1:4 dilution factor for Cl- test

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	Ø	N	BH05	1	1.0'	SP	moist, non-plastic brown poorly graded sand (c.)
M	<128	Ø	N		2	2.0'	SP	
M	<128	Ø	N	BH05A	4	4.0'	SP	TOT DEPTH

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

Identifier:	Date:
PH05	9/17/19
Project Name:	**RP Number:**
BEU 33 Tank Battery	2RP-1905
Logged By: Anna Byers	**Method:** Track Hoe
Lat/Long: Collector	**Field Screening:** PID & HACH Cl⁻ Strips
Hole Diameter: N/A	**Total Depth:** 4.0'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: 1:4 dilution factor for Cl⁻ test

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	Ø	N	PH05	1	1.0'	SP	moist, brown non plastic, poorly graded sand (c.)
M	<128	Ø	N		2	2.0'	SP	
M	<128	Ø	N		3	3.0'	SP	
M	<128	Ø	N	PH05A	4	4.0'	SP	TOT DEPTH
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH06	9/17/19
Project Name:	**RP Number:**
BEU 33 Tank Battery	2RP-1905
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AB / Method: Track Hoe
Lat/Long: Collector	Field Screening: PID + Hach Cl⁻ Strips / Hole Diameter: N/A / Total Depth: 4'

Comments: 1:4 dilution factor for Cl⁻ test

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
m	212	Ø	N		1	1'	SP	moist, brown non plastic poorly graded sand (c.)
m	312	Ø	N	PH06	2	2'	SP	
m	312	Ø	N		3	3'	SP	
m	352	Ø	N	PH06A	4	4'	SP	
					5			TOT DEPTH
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH07	Date: 9/17/19
Project Name: BEU 33 TB	RP Number: 2RP-1905
Logged By: AB	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Collector
Field Screening: PID & HACH Cl⁻ Strips

Comments:
1:4 dilution factor for Cl⁻ test

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<128	Ø	N		1	1'	SP	moist, brown non-plastic poorly graded sand (c.)
M	<128	Ø	N		2	2'	SP	
M	428	Ø	N	PH07	3	3'	SP	
m	156	Ø	N	PH07A	4	4'	SP	
					5			TOT DEPTH
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

Southwest facing view of the open excavations.

Project: 012918068	XTO Energy, Inc. Big Eddy Unit 33 Tank Battery	LTE Advancing Opportunity
July 26, 2018	Photographic Log	

South facing view of the open excavations.

Project: 012918068	XTO Energy, Inc. Big Eddy Unit 33 Tank Battery	LTE Advancing Opportunity
July 30, 2018	Photographic Log	

East facing view of the open excavations.

Project: 012918068	XTO Energy, Inc. Big Eddy Unit 33 Tank Battery	LTE Advancing Opportunity
July 30, 2018	Photographic Log	

West facing view of the open excavations, post tank removal.

Project: 012918068	XTO Energy, Inc. Big Eddy Unit 33 Tank Battery	LTE Advancing Opportunity
September 18, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 594068

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 33 (012918068)

021918068

06-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)

06-MAR-19

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

Reference: XENCO Report No(s): **594068**
BEU 33 (012918068)
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 594068. 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. 594068 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	07-27-18 08:10	6 In	594068-001
SW01	S	07-26-18 14:25	3 ft	594068-002
SW02	S	07-26-18 14:30	3 ft	594068-003
FS02	S	07-26-18 15:30	2 ft	594068-004
SW04	S	07-26-18 15:30	1 ft	594068-005
SW05	S	07-27-18 08:30	1 ft	594068-006
SW06	S	07-27-18 08:30	1 ft	594068-007
FS01	S	07-27-18 10:00	10 ft	594068-008

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 (012918068)

Project ID: *021918068*
Work Order Number(s): *594068*

Report Date: *06-MAR-19*
Date Received: *07/31/2018*

Sample receipt non conformances and comments:

Per clients email, changed sample depth for sample 008 (FS01) from 6' to 10' JKR 08/06/18
Per clients email, changed sample 001 name from SS01A to SS01. JK 03/06/19 NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058740 Inorganic Anions by EPA 300
Lab Sample ID 594068-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 594068-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3058865 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594068

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 (012918068)

Project Id: 021918068
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Tue Jul-31-18 10:35 am
Report Date: 06-MAR-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	594068-001		594068-002		594068-003		594068-004		594068-005		594068-006	
	Field Id:	SS01		SW01		SW02		FS02		SW04		SW05	
	Depth:	6- In		3- ft		3- ft		2- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-27-18 08:10		Jul-26-18 14:25		Jul-26-18 14:30		Jul-26-18 15:30		Jul-26-18 15:30		Jul-27-18 08:30	
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00	
	Analyzed:	Aug-03-18 19:24		Aug-03-18 19:44		Aug-03-18 20:05		Aug-03-18 20:25		Aug-03-18 20:46		Aug-03-18 21:07	
	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	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Aug-02-18 09:15		Aug-02-18 09:15		Aug-02-18 09:15		Aug-02-18 09:15		Aug-02-18 09:15		Aug-02-18 09:15	
	Analyzed:	Aug-03-18 10:32		Aug-02-18 17:47		Aug-02-18 17:54		Aug-02-18 18:00		Aug-02-18 18:07		Aug-02-18 18:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		18.5	4.99	<4.95	4.95	<5.01	5.01	113	4.95	40.1	5.00	310	4.99
TPH by SW8015 Mod	***Extracted:***	Jul-31-18 17:00		Jul-31-18 17:00		Jul-31-18 17:00		Jul-31-18 17:00		Jul-31-18 17:00		Jul-31-18 17:00	
	Analyzed:	Aug-01-18 00:32		Aug-01-18 00:52		Aug-01-18 01:12		Aug-01-18 02:11		Aug-01-18 02:31		Aug-01-18 02:51	
	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	25.3	15.0	20.7	15.0	27.8	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
Oil Range Hydrocarbons (ORO)		<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	25.3	15.0	20.7	15.0	27.8	15.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 594068

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 (012918068)

Project Id: 021918068
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Tue Jul-31-18 10:35 am
Report Date: 06-MAR-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	594068-007		594068-008					
	Field Id:	SW06		FS01					
	Depth:	1- ft		10- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-27-18 08:30		Jul-27-18 10:00					
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 15:00		Aug-03-18 15:00					
	Analyzed:	Aug-03-18 23:11		Aug-03-18 23:32					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00202	0.00202				
Toluene		<0.00201	0.00201	<0.00202	0.00202				
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202				
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403				
o-Xylene		<0.00201	0.00201	<0.00202	0.00202				
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202				
Total BTEX		<0.00201	0.00201	<0.00202	0.00202				
Inorganic Anions by EPA 300	***Extracted:***	Aug-02-18 09:15		Aug-02-18 09:15					
	Analyzed:	Aug-02-18 18:34		Aug-02-18 18:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		212	4.95	84.1	4.96				
TPH by SW8015 Mod	***Extracted:***	Jul-31-18 17:00		Jul-31-18 17:00					
	Analyzed:	Aug-01-18 03:11		Aug-01-18 03:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id: **SS01** Matrix: Soil Date Received:07.31.18 10.35

Lab Sample Id: 594068-001 Date Collected: 07.27.18 08.10 Sample Depth: 6 In

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

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.02.18 09.15 Basis: Wet Weight

Seq Number: 3058740

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.5**	4.99	mg/kg	08.03.18 10.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 07.31.18 17.00 Basis: Wet Weight

Seq Number: 3058483

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.01.18 00.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 00.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 00.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.18 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.01.18 00.32	
o-Terphenyl	84-15-1	95	%	70-135	08.01.18 00.32	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-001	Date Collected:	07.27.18 08.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.03.18 19.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.03.18 19.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.03.18 19.24	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.03.18 19.24	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-002	Date Collected:	07.26.18 14.25	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.02.18 17.47	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.01.18 00.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 00.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 00.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.01.18 00.52	
o-Terphenyl	84-15-1	94	%	70-135	08.01.18 00.52	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-002	Date Collected:	07.26.18 14.25	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.03.18 19.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.18 19.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.03.18 19.44	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.03.18 19.44	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-003	Date Collected:	07.26.18 14.30	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	08.02.18 17.54	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.01.18 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.01.18 01.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.01.18 01.12	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.01.18 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.01.18 01.12	
o-Terphenyl	84-15-1	100	%	70-135	08.01.18 01.12	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-003	Date Collected:	07.26.18 14.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.03.18 20.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.03.18 20.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.03.18 20.05	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.03.18 20.05	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-004	Date Collected:	07.26.18 15.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**113**	4.95	mg/kg	08.02.18 18.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**25.3**	15.0	mg/kg	08.01.18 02.11		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 02.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 02.11	U	1
Total TPH	PHC635	**25.3**	15.0	mg/kg	08.01.18 02.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.01.18 02.11	
o-Terphenyl	84-15-1	80	%	70-135	08.01.18 02.11	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-004	Date Collected:	07.26.18 15.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.03.18 20.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.03.18 20.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.03.18 20.25	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.03.18 20.25	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-005	Date Collected:	07.26.18 15.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.1**	5.00	mg/kg	08.02.18 18.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**20.7**	15.0	mg/kg	08.01.18 02.31		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 02.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 02.31	U	1
Total TPH	PHC635	**20.7**	15.0	mg/kg	08.01.18 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.01.18 02.31	
o-Terphenyl	84-15-1	82	%	70-135	08.01.18 02.31	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-005	Date Collected:	07.26.18 15.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.03.18 20.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.03.18 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.03.18 20.46	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.03.18 20.46	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-006	Date Collected:	07.27.18 08.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**310**	4.99	mg/kg	08.02.18 18.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.8**	15.0	mg/kg	08.01.18 02.51		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 02.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 02.51	U	1
Total TPH	PHC635	**27.8**	15.0	mg/kg	08.01.18 02.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.01.18 02.51	
o-Terphenyl	84-15-1	86	%	70-135	08.01.18 02.51	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-006	Date Collected:	07.27.18 08.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.03.18 21.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.03.18 21.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.03.18 21.07	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.03.18 21.07	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-007	Date Collected:	07.27.18 08.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**212**	4.95	mg/kg	08.02.18 18.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.01.18 03.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 03.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 03.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.18 03.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.01.18 03.11	
o-Terphenyl	84-15-1	91	%	70-135	08.01.18 03.11	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-007	Date Collected:	07.27.18 08.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.03.18 23.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.03.18 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.03.18 23.11	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.03.18 23.11	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-008	Date Collected:	07.27.18 10.00	Sample Depth:	10 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.02.18 09.15	Basis:	Wet Weight
Seq Number:	3058740				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.1**	4.96	mg/kg	08.02.18 18.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.31.18 17.00	Basis:	Wet Weight
Seq Number:	3058483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.01.18 03.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.01.18 03.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.01.18 03.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.01.18 03.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.01.18 03.31	
o-Terphenyl	84-15-1	96	%	70-135	08.01.18 03.31	

Certificate of Analytical Results 594068

LT Environmental, Inc., Arvada, CO

BEU 33 (012918068)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.31.18 10.35
Lab Sample Id:	594068-008	Date Collected:	07.27.18 10.00	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.03.18 23.32	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.03.18 23.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.03.18 23.32	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.03.18 23.32	

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 594068

LT Environmental, Inc.

BEU 33 (012918068)

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058740 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659610-1-BLK — LCS Sample Id: 7659610-1-BKS — LCSD Sample Id: 7659610-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	267	107	90-110	3	20	mg/kg	08.02.18 15:58	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058740 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 593962-041 — MS Sample Id: 593962-041 S — MSD Sample Id: 593962-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.40	248	277	110	271	108	90-110	2	20	mg/kg	08.02.18 16:32	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058740 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 594068-005 — MS Sample Id: 594068-005 S — MSD Sample Id: 594068-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.1	250	323	113	314	110	90-110	3	20	mg/kg	08.02.18 18:14	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058483 — Matrix: Solid — Date Prep: 07.31.18
MB Sample Id: 7659521-1-BLK — LCS Sample Id: 7659521-1-BKS — LCSD Sample Id: 7659521-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	980	98	990	99	70-135	1	20	mg/kg	07.31.18 20:55	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1020	102	70-135	1	20	mg/kg	07.31.18 20:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		128		127		70-135	%	07.31.18 20:55
o-Terphenyl	104		104		105		70-135	%	07.31.18 20:55

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 594068

LT Environmental, Inc.

BEU 33 (012918068)

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3058483 | Matrix: Soil | Date Prep: 07.31.18
Parent Sample Id: 594074-001 | MS Sample Id: 594074-001 S | MSD Sample Id: 594074-001 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)	<22.8	1520	1380	91	1410	93	70-135	2	20	mg/kg	07.31.18 21:55	
Diesel Range Organics (DRO)	<22.8	1520	1410	93	1430	94	70-135	1	20	mg/kg	07.31.18 21:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		123		70-135	%	07.31.18 21:55
o-Terphenyl	102		102		70-135	%	07.31.18 21:55

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058865 | Matrix: Solid | Date Prep: 08.03.18
MB Sample Id: 7659750-1-BLK | LCS Sample Id: 7659750-1-BKS | LCSD Sample Id: 7659750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0997	100	0.103	103	70-130	3	35	mg/kg	08.03.18 16:36	
Toluene	<0.00200	0.0998	0.0978	98	0.103	103	70-130	5	35	mg/kg	08.03.18 16:36	
Ethylbenzene	<0.00200	0.0998	0.104	104	0.108	108	70-130	4	35	mg/kg	08.03.18 16:36	
m,p-Xylenes	<0.00399	0.200	0.211	106	0.220	110	70-130	4	35	mg/kg	08.03.18 16:36	
o-Xylene	<0.00200	0.0998	0.0993	99	0.105	105	70-130	6	35	mg/kg	08.03.18 16:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		118		118		70-130	%	08.03.18 16:36
4-Bromofluorobenzene	97		92		101		70-130	%	08.03.18 16:36

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058865 | Matrix: Soil | Date Prep: 08.03.18
Parent Sample Id: 594381-001 | MS Sample Id: 594381-001 S | MSD Sample Id: 594381-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0915	92	0.0888	89	70-130	3	35	mg/kg	08.03.18 17:18	
Toluene	<0.00200	0.100	0.0846	85	0.0837	84	70-130	1	35	mg/kg	08.03.18 17:18	
Ethylbenzene	<0.00200	0.100	0.0738	74	0.0800	80	70-130	8	35	mg/kg	08.03.18 17:18	
m,p-Xylenes	<0.00400	0.200	0.145	73	0.161	80	70-130	10	35	mg/kg	08.03.18 17:18	
o-Xylene	<0.00200	0.100	0.0716	72	0.0765	77	70-130	7	35	mg/kg	08.03.18 17:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	121		120		70-130	%	08.03.18 17:18
4-Bromofluorobenzene	102		100		70-130	%	08.03.18 17:18

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

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Page ___ Of ___

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Xenco Quote # | Xenco Job # 594068

Client / Reporting Information

Company Name / Branch: LT Environmental
Company Address: 2300 N. "A" street, Building 1, unit 103 Midland, TX
Email: Abaker@LTenv.com Phone No: (432)704-5178
Project Contact: Adrian Baker
Samplers's Name: Garrett Green

Project Information

Project Name/Number: BEU 33 (012918068)
Project Location: Carlsbad, NM
Invoice To: XTO, Kyle Littrell
PO Number: 2RP-1905

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX (8021) (only BTEX)	TPH (mod) (GRO)(DRO) 8015	Chloride (300.0)	Field Comments
1	SS01A	6"	7/27	0810	S	1								X	X	X	X	
2	SW01	3'	7/26	1425	S	1								X	X	X	X	
3	SW02	3'	7/26	1430	S	1								X	X	X	X	
4	FS02	2'	7/26	1530	S	1								X	X	X	X	
5	SW04	1'	7/26	1530	S	1								X	X	X	X	
6	SW05	1'	7/27	0830	S	1								X	X	X	X	
7	SW06	1'	7/27	0830	S	1								X	X	X	X	
8	FS01	6'	7/27	1000	S	1								X	X	X	X	
9																		
10																		

D Green 7/27/2018

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

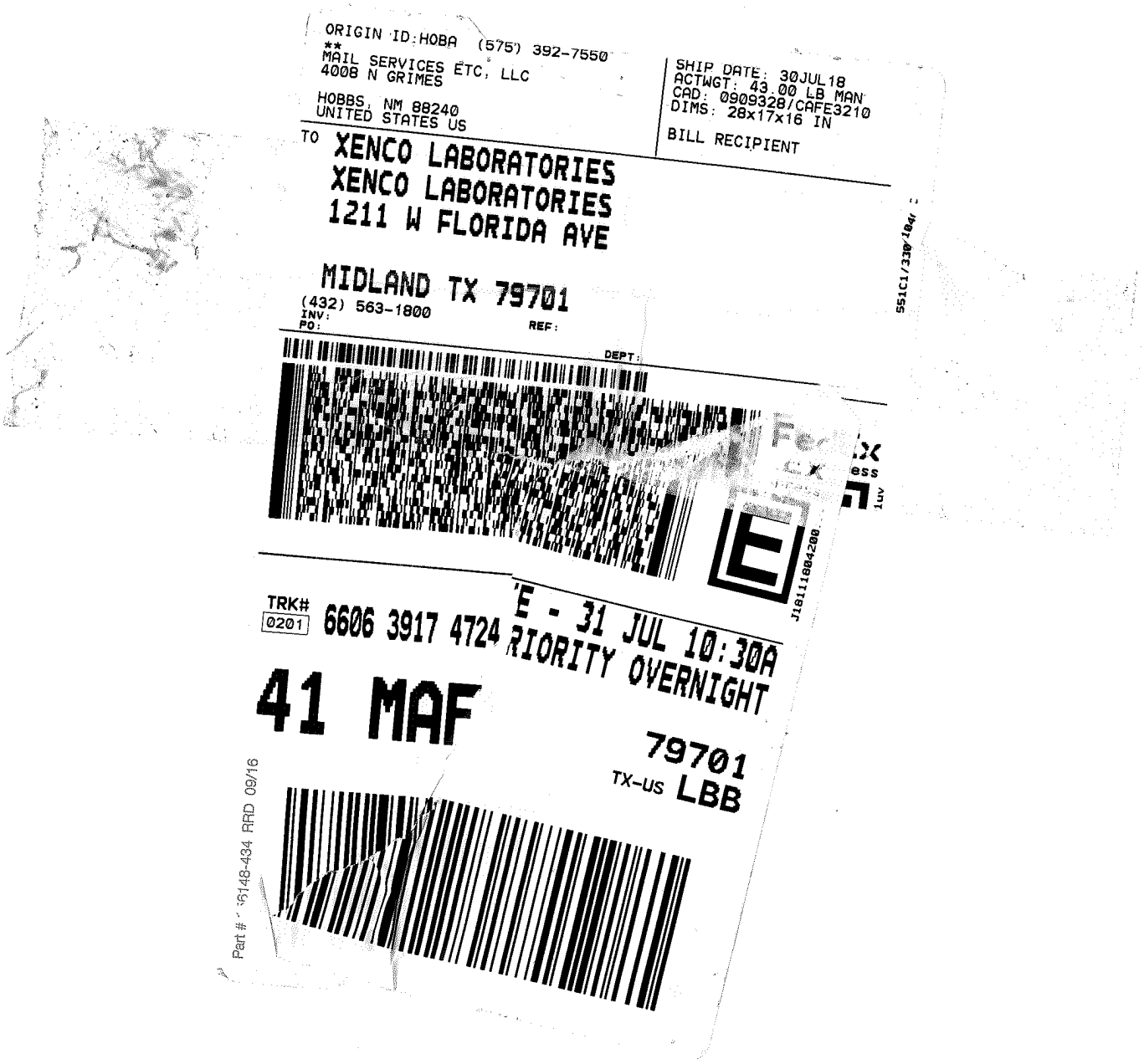
Notes:

FED-EX / UPS: Tracking # 606639174724

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	Garrett Green	7/27/2018 1707	Chris Pollard	Chris Pollard	7/30/18 15:30	
2						
3		7/31/18 10:35	Bill Kellahin			
4						
5				Custody Seal #	Preserved where applicable	On Ice: X; Cooler Temp. 1.7°C; Thermo. Corr. Factor 1.8 0°

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


ORIGIN ID:HOBA (575) 392-7550
**
MAIL SERVICES ETC, LLC
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US
SHIP DATE: 30JUL18
ACTWGT: 43.00 LB MAN
CAD: 0909328/CAFE3210
DIMS: 28x17x16 IN
BILL RECIPIENT
TO XENCO LABORATORIES
XENCO LABORATORIES
1211 W FLORIDA AVE
MIDLAND TX 79701
(432) 563-1800
INV:
PO:
REF:
DEPT:
TRK#
0201 6606 3917 4724
E - 31 JUL 10:30A
RIORITY OVERNIGHT
41 MAF
79701
TX-US LBB
Part # 5148-434 RRD 09/16

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/31/2018 10:35:00 AM

Work Order #: 594068

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)?	1.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 07/31/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 07/31/2018
Jessica Kramer

Analytical Report 594381

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 33 (01298068)

01298068

08-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

08-AUG-18

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

Reference: XENCO Report No(s): **594381**
BEU 33 (01298068)
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 594381. 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. 594381 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	07-30-18 00:00	2 ft	594381-001
SW07	S	07-30-18 00:00	1 ft	594381-002
SW08	S	07-30-18 00:00	1 ft	594381-003
SS02	S	07-30-18 00:00	1.5 ft	594381-004
SS03	S	07-30-18 00:00	1.5 ft	594381-005
SS04	S	07-30-18 00:00	1.5 ft	594381-006
SS05	S	07-30-18 00:00	1.5 ft	594381-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 (01298068)

Project ID: *01298068*
Work Order Number(s): *594381*

Report Date: *08-AUG-18*
Date Received: *08/01/2018*

Sample receipt non conformances and comments:

Per client email, updated sample depth on sample 001 from 2" to 2'. JKR 08/08/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058865 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3058909 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594381

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 (01298068)

Project Id: 01298068
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Aug-01-18 01:15 pm
Report Date: 08-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	594381-001		594381-002		594381-003		594381-004		594381-005		594381-006	
	Field Id:	FS05		SW07		SW08		SS02		SS03		SS04	
	Depth:	2- ft		1- ft		1- ft		1.5- ft		1.5- ft		1.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-30-18 00:00		Jul-30-18 00:00		Jul-30-18 00:00		Jul-30-18 00:00		Jul-30-18 00:00		Jul-30-18 00:00	
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 15:00		Aug-03-18 17:00	
	Analyzed:	Aug-03-18 18:42		Aug-03-18 23:52		Aug-04-18 00:13		Aug-04-18 00:34		Aug-04-18 00:54		Aug-04-18 07:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00404	0.00404
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Inorganic Anions by EPA 300	***Extracted:***	Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30	
	Analyzed:	Aug-03-18 12:42		Aug-03-18 12:49		Aug-03-18 12:56		Aug-03-18 13:16		Aug-03-18 13:22		Aug-03-18 13:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		312	5.01	275	5.01	205	5.02	74.1	5.00	13.2	5.02	<5.03	5.03
TPH by SW8015 Mod	***Extracted:***	Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00	
	Analyzed:	Aug-03-18 04:07		Aug-03-18 05:06		Aug-03-18 05:26		Aug-03-18 05:46		Aug-03-18 06:06		Aug-03-18 06:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		15.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	15.7	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	19.5	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		15.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	15.7	15.0	19.5	14.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 594381

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 (01298068)

Project Id: 01298068
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Aug-01-18 01:15 pm
Report Date: 08-AUG-18
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	594381-007					
	Field Id:	SS05					
	Depth:	1.5- ft					
	Matrix:	SOIL					
	Sampled:	Jul-30-18 00:00					
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 17:00					
	Analyzed:	Aug-04-18 07:52					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Aug-03-18 09:30					
	Analyzed:	Aug-03-18 13:36					
	Units/RL:	mg/kg	RL				
Chloride		<5.00	5.00				
TPH by SW8015 Mod	***Extracted:***	Aug-02-18 17:00					
	Analyzed:	Aug-03-18 06:46					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0				
Total TPH		<15.0	15.0				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-001	Date Collected:	07.30.18 00.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**312**	5.01	mg/kg	08.03.18 12.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.8**	15.0	mg/kg	08.03.18 04.07		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 04.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 04.07	U	1
Total TPH	PHC635	**15.8**	15.0	mg/kg	08.03.18 04.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.03.18 04.07	
o-Terphenyl	84-15-1	84	%	70-135	08.03.18 04.07	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-001	Date Collected:	07.30.18 00.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.03.18 18.42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.03.18 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	08.03.18 18.42	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.03.18 18.42	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-002	Date Collected:	07.30.18 00.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**275**	5.01	mg/kg	08.03.18 12.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 05.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 05.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 05.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 05.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.03.18 05.06	
o-Terphenyl	84-15-1	85	%	70-135	08.03.18 05.06	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-002	Date Collected:	07.30.18 00.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.03.18 23.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.03.18 23.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.03.18 23.52	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.03.18 23.52	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-003	Date Collected:	07.30.18 00.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**205**	5.02	mg/kg	08.03.18 12.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 05.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 05.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 05.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 05.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.03.18 05.26	
o-Terphenyl	84-15-1	84	%	70-135	08.03.18 05.26	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-003	Date Collected:	07.30.18 00.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.04.18 00.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.04.18 00.13	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.04.18 00.13	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id: **SS02** Matrix: Soil Date Received:08.01.18 13.15

Lab Sample Id: 594381-004 Date Collected: 07.30.18 00.00 Sample Depth: 1.5 ft

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

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.03.18 09.30 Basis: Wet Weight

Seq Number: 3058908

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.1**	5.00	mg/kg	08.03.18 13.16		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.02.18 17.00 Basis: Wet Weight

Seq Number: 3058802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 05.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 05.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 05.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 05.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.03.18 05.46	
o-Terphenyl	84-15-1	92	%	70-135	08.03.18 05.46	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-004	Date Collected:	07.30.18 00.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.04.18 00.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.04.18 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.04.18 00.34	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.04.18 00.34	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id: **SS03** Matrix: Soil Date Received:08.01.18 13.15

Lab Sample Id: 594381-005 Date Collected: 07.30.18 00.00 Sample Depth: 1.5 ft

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

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.03.18 09.30 Basis: Wet Weight

Seq Number: 3058908

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.2**	5.02	mg/kg	08.03.18 13.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.02.18 17.00 Basis: Wet Weight

Seq Number: 3058802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.7**	15.0	mg/kg	08.03.18 06.06		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 06.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 06.06	U	1
Total TPH	PHC635	**15.7**	15.0	mg/kg	08.03.18 06.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.03.18 06.06	
o-Terphenyl	84-15-1	82	%	70-135	08.03.18 06.06	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-005	Date Collected:	07.30.18 00.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 15.00	Basis:	Wet Weight
Seq Number:	3058865				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.04.18 00.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.04.18 00.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.04.18 00.54	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.04.18 00.54	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id: **SS04** Matrix: Soil Date Received:08.01.18 13.15

Lab Sample Id: 594381-006 Date Collected: 07.30.18 00.00 Sample Depth: 1.5 ft

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

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.03.18 09.30 Basis: Wet Weight

Seq Number: 3058908

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.03.18 13.29	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.02.18 17.00 Basis: Wet Weight

Seq Number: 3058802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.03.18 06.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.5**	14.9	mg/kg	08.03.18 06.26		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.03.18 06.26	U	1
Total TPH	PHC635	**19.5**	14.9	mg/kg	08.03.18 06.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.03.18 06.26	
o-Terphenyl	84-15-1	86	%	70-135	08.03.18 06.26	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-006	Date Collected:	07.30.18 00.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.04.18 07.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.04.18 07.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.04.18 07.31	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.04.18 07.31	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id: **SS05** Matrix: Soil Date Received:08.01.18 13.15

Lab Sample Id: 594381-007 Date Collected: 07.30.18 00.00 Sample Depth: 1.5 ft

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

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.03.18 09.30 Basis: Wet Weight

Seq Number: 3058908

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.03.18 13.36	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.02.18 17.00 Basis: Wet Weight

Seq Number: 3058802

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 06.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 06.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 06.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 06.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.03.18 06.46	
o-Terphenyl	84-15-1	90	%	70-135	08.03.18 06.46	

Certificate of Analytical Results 594381

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594381-007	Date Collected:	07.30.18 00.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.04.18 07.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 07.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.04.18 07.52	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.04.18 07.52	

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 594381

LT Environmental, Inc.

BEU 33 (01298068)

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659700-1-BLK — LCS Sample Id: 7659700-1-BKS — LCSD Sample Id: 7659700-1-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	260	104	259	104	90-110	0	20	mg/kg	08.03.18 10:07	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594371-001 — MS Sample Id: 594371-001 S — MSD Sample Id: 594371-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	864	249	1070	83	1080	87	90-110	1	20	mg/kg	08.03.18 11:29	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594381-003 — MS Sample Id: 594381-003 S — MSD Sample Id: 594381-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	205	251	466	104	463	103	90-110	1	20	mg/kg	08.03.18 13:02	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058802 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659680-1-BLK — LCS Sample Id: 7659680-1-BKS — LCSD Sample Id: 7659680-1-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)	6.36	1000	975	98	996	100	70-135	2	20	mg/kg	08.03.18 03:27	
Diesel Range Organics (DRO)	3.61	1000	982	98	1010	101	70-135	3	20	mg/kg	08.03.18 03:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		120		124		70-135	%	08.03.18 03:27
o-Terphenyl	98		103		102		70-135	%	08.03.18 03:27

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 594381

LT Environmental, Inc.

BEU 33 (01298068)

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058802 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 594381-001 — MS Sample Id: 594381-001 S — MSD Sample Id: 594381-001 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)	15.8	999	857	84	839	83	70-135	2	20	mg/kg	08.03.18 04:26	
Diesel Range Organics (DRO)	4.94	999	885	88	879	88	70-135	1	20	mg/kg	08.03.18 04:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	08.03.18 04:26
o-Terphenyl	91		94		70-135	%	08.03.18 04:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058865 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659750-1-BLK — LCS Sample Id: 7659750-1-BKS — LCSD Sample Id: 7659750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0997	100	0.103	103	70-130	3	35	mg/kg	08.03.18 16:36	
Toluene	<0.00200	0.0998	0.0978	98	0.103	103	70-130	5	35	mg/kg	08.03.18 16:36	
Ethylbenzene	<0.00200	0.0998	0.104	104	0.108	108	70-130	4	35	mg/kg	08.03.18 16:36	
m,p-Xylenes	<0.00399	0.200	0.211	106	0.220	110	70-130	4	35	mg/kg	08.03.18 16:36	
o-Xylene	<0.00200	0.0998	0.0993	99	0.105	105	70-130	6	35	mg/kg	08.03.18 16:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		118		118		70-130	%	08.03.18 16:36
4-Bromofluorobenzene	97		92		101		70-130	%	08.03.18 16:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058909 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659751-1-BLK — LCS Sample Id: 7659751-1-BKS — LCSD Sample Id: 7659751-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.102	102	70-130	0	35	mg/kg	08.04.18 02:40	
Toluene	<0.00200	0.0998	0.101	101	0.101	101	70-130	0	35	mg/kg	08.04.18 02:40	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.106	106	70-130	1	35	mg/kg	08.04.18 02:40	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.214	107	70-130	2	35	mg/kg	08.04.18 02:40	
o-Xylene	<0.00200	0.0998	0.101	101	0.102	102	70-130	1	35	mg/kg	08.04.18 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		123		109		70-130	%	08.04.18 02:40
4-Bromofluorobenzene	91		104		102		70-130	%	08.04.18 02:40

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

QC Summary 594381

LT Environmental, Inc.

BEU 33 (01298068)

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3058865 Matrix: Soil Date Prep: 08.03.18
Parent Sample Id: 594381-001 MS Sample Id: 594381-001 S MSD Sample Id: 594381-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0915	92	0.0888	89	70-130	3	35	mg/kg	08.03.18 17:18	
Toluene	<0.00200	0.100	0.0846	85	0.0837	84	70-130	1	35	mg/kg	08.03.18 17:18	
Ethylbenzene	<0.00200	0.100	0.0738	74	0.0800	80	70-130	8	35	mg/kg	08.03.18 17:18	
m,p-Xylenes	<0.00400	0.200	0.145	73	0.161	80	70-130	10	35	mg/kg	08.03.18 17:18	
o-Xylene	<0.00200	0.100	0.0716	72	0.0765	77	70-130	7	35	mg/kg	08.03.18 17:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	121		120		70-130	%	08.03.18 17:18
4-Bromofluorobenzene	102		100		70-130	%	08.03.18 17:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3058909 Matrix: Soil Date Prep: 08.03.18
Parent Sample Id: 594382-004 MS Sample Id: 594382-004 S MSD Sample Id: 594382-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0910	91	0.0863	85	70-130	5	35	mg/kg	08.04.18 03:22	
Toluene	0.000369	0.100	0.0895	89	0.0850	84	70-130	5	35	mg/kg	08.04.18 03:22	
Ethylbenzene	<0.00200	0.100	0.0936	94	0.0894	89	70-130	5	35	mg/kg	08.04.18 03:22	
m,p-Xylenes	<0.00401	0.200	0.187	94	0.179	89	70-130	4	35	mg/kg	08.04.18 03:22	
o-Xylene	<0.00200	0.100	0.0892	89	0.0858	85	70-130	4	35	mg/kg	08.04.18 03:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	128		127		70-130	%	08.04.18 03:22
4-Bromofluorobenzene	103		102		70-130	%	08.04.18 03:22

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

CHAIN OF CUSTODY

Revision 2016.1

Page 1 Of 1

XENCO LABORATORIES

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Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 594381

Client / Reporting Information

Company Name / Branch: LTEnvironmental
Company Address: 3300 N. "A" Street, Building 1, Unit 103 Midland, Tx
Email: Abaker@LTEnv.com Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Garrett Green

Project Information

Project Name/Number: BEU-33 (01298068)
Project Location: Carlsbad, NM
Invoice To: XTO, Kyle Littrell
PO Number: 2RP 1905

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX(8021) (only BTEX)	TPH(mRO)(GRO)(DRO) 8015	Chloride (300.00)	Field Comments
1	FS05	2'	7/30/18	1610	S	1								X	X	X	X	
2	SW07	1'	7/30/18	1605	S	1								X	X	X	X	
3	SW08	1'	7/30/18	1615	S	1								X	X	X	X	
4	SS02	1.5'	7/30/18	1500	S	1								X	X	X	X	
5	SS03	1.5'	7/30/18	1510	S	1								X	X	X	X	
6	SS04	1.5'	7/30/18	1520	S	1								X	X	X	X	
7	SS05	1.5'	7/30/18	1530	S	1								X	X	X	X	
8																		
9																		
10																		

7/31/2018

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

TAT Starts Day received by Lab, if received by 5:00 pm

FED-EX / UPS: Tracking # 772865107255

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	David Doss	7/31/18 09:30				
2					7/31 15:30	8/1/18 1315
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 3.2 NR Thermo. Corr. Factor 2.0

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

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: 08/01/2018 01:15:00 PM

Work Order #: 594381

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
#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: 08/02/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/02/2018
Jessica Kramer

Analytical Report 594384

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 33 (01298068)

01298068

06-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

06-AUG-18

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

Reference: XENCO Report No(s): **594384**
BEU 33 (01298068)
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 594384. 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. 594384 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

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

Sample Cross Reference 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	07-30-18 12:30	12 ft	594384-001
FS04	S	07-30-18 10:30	12 ft	594384-002
SW09	S	07-30-18 16:00	1 ft	594384-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 (01298068)

Project ID: *01298068*
Work Order Number(s): *594384*

Report Date: *06-AUG-18*
Date Received: *08/01/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058909 BTEX by EPA 8021B

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

Certificate of Analysis Summary 594384

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 (01298068)

Project Id: 01298068
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Aug-01-18 01:15 pm
Report Date: 06-AUG-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	594384-001		594384-002		594384-003			
	Field Id:	FS03		FS04		SW09			
	Depth:	12- ft		12- ft		1- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-30-18 12:30		Jul-30-18 10:30		Jul-30-18 16:00			
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 17:00		Aug-03-18 17:00		Aug-03-18 17:00			
	Analyzed:	Aug-04-18 06:29		Aug-04-18 06:50		Aug-04-18 07:10			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00403	0.00403		
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202		
Inorganic Anions by EPA 300	***Extracted:***	Aug-03-18 11:15		Aug-03-18 11:15		Aug-03-18 11:15			
	Analyzed:	Aug-03-18 15:36		Aug-03-18 15:03		Aug-03-18 15:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1970	25.1	729	4.99	511	5.02		
TPH by SW8015 Mod	***Extracted:***	Aug-02-18 14:00		Aug-02-18 14:00		Aug-02-18 14:00			
	Analyzed:	Aug-03-18 00:51		Aug-03-18 01:10		Aug-03-18 01:30			
	Units/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		
Diesel Range Organics (DRO)		<15.0	15.0	32.9	15.0	<14.9	14.9		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9		
Total TPH		<15.0	15.0	32.9	15.0	<14.9	14.9		

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-001	Date Collected:	07.30.18 12.30	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 11.15	Basis:	Wet Weight
Seq Number:	3058919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1970**	25.1	mg/kg	08.03.18 15.36		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 14.00	Basis:	Wet Weight
Seq Number:	3058799				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 00.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 00.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.03.18 00.51	
o-Terphenyl	84-15-1	89	%	70-135	08.03.18 00.51	

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-001	Date Collected:	07.30.18 12.30	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.04.18 06.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 06.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.04.18 06.29	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.04.18 06.29	

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-002	Date Collected:	07.30.18 10.30	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 11.15	Basis:	Wet Weight
Seq Number:	3058919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**729**	4.99	mg/kg	08.03.18 15.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 14.00	Basis:	Wet Weight
Seq Number:	3058799				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 01.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**32.9**	15.0	mg/kg	08.03.18 01.10		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 01.10	U	1
Total TPH	PHC635	**32.9**	15.0	mg/kg	08.03.18 01.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.03.18 01.10	
o-Terphenyl	84-15-1	91	%	70-135	08.03.18 01.10	

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-002	Date Collected:	07.30.18 10.30	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.04.18 06.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 06.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.04.18 06.50	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.04.18 06.50	

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-003	Date Collected:	07.30.18 16.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 11.15	Basis:	Wet Weight
Seq Number:	3058919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**511**	5.02	mg/kg	08.03.18 15.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 14.00	Basis:	Wet Weight
Seq Number:	3058799				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.03.18 01.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.03.18 01.30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.03.18 01.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.03.18 01.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.03.18 01.30	
o-Terphenyl	84-15-1	85	%	70-135	08.03.18 01.30	

Certificate of Analytical Results 594384

LT Environmental, Inc., Arvada, CO

BEU 33 (01298068)

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594384-003	Date Collected:	07.30.18 16.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.04.18 07.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.04.18 07.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.04.18 07.10	
4-Bromofluorobenzene	460-00-4	80	%	70-130	08.04.18 07.10	

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 594384

LT Environmental, Inc.

BEU 33 (01298068)

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659702-1-BLK — LCS Sample Id: 7659702-1-BKS — LCSD Sample Id: 7659702-1-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	268	107	264	106	90-110	2	20	mg/kg	08.03.18 14:49	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594384-002 — MS Sample Id: 594384-002 S — MSD Sample Id: 594384-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	729	250	957	91	988	104	90-110	3	20	mg/kg	08.03.18 15:09	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594393-005 — MS Sample Id: 594393-005 S — MSD Sample Id: 594393-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	973	250	1220	99	1210	95	90-110	1	20	mg/kg	08.03.18 16:43	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058799 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659678-1-BLK — LCS Sample Id: 7659678-1-BKS — LCSD Sample Id: 7659678-1-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)	5.92	1000	1040	104	952	95	70-135	9	20	mg/kg	08.02.18 18:18	
Diesel Range Organics (DRO)	4.16	1000	1080	108	976	98	70-135	10	20	mg/kg	08.02.18 18:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		126		122		70-135	%	08.02.18 18:18
o-Terphenyl	102		108		104		70-135	%	08.02.18 18:18

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

QC Summary 594384

LT Environmental, Inc.

BEU 33 (01298068)

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058799 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 594409-001 — MS Sample Id: 594409-001 S — MSD Sample Id: 594409-001 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)	7.88	998	893	89	927	92	70-135	4	20	mg/kg	08.02.18 19:18	
Diesel Range Organics (DRO)	2.16	998	906	91	959	96	70-135	6	20	mg/kg	08.02.18 19:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		118		70-135	%	08.02.18 19:18
o-Terphenyl	98		102		70-135	%	08.02.18 19:18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058909 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659751-1-BLK — LCS Sample Id: 7659751-1-BKS — LCSD Sample Id: 7659751-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.102	102	70-130	0	35	mg/kg	08.04.18 02:40	
Toluene	<0.00200	0.0998	0.101	101	0.101	101	70-130	0	35	mg/kg	08.04.18 02:40	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.106	106	70-130	1	35	mg/kg	08.04.18 02:40	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.214	107	70-130	2	35	mg/kg	08.04.18 02:40	
o-Xylene	<0.00200	0.0998	0.101	101	0.102	102	70-130	1	35	mg/kg	08.04.18 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		123		109		70-130	%	08.04.18 02:40
4-Bromofluorobenzene	91		104		102		70-130	%	08.04.18 02:40

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058909 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594382-004 — MS Sample Id: 594382-004 S — MSD Sample Id: 594382-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0910	91	0.0863	85	70-130	5	35	mg/kg	08.04.18 03:22	
Toluene	0.000369	0.100	0.0895	89	0.0850	84	70-130	5	35	mg/kg	08.04.18 03:22	
Ethylbenzene	<0.00200	0.100	0.0936	94	0.0894	89	70-130	5	35	mg/kg	08.04.18 03:22	
m,p-Xylenes	<0.00401	0.200	0.187	94	0.179	89	70-130	4	35	mg/kg	08.04.18 03:22	
o-Xylene	<0.00200	0.100	0.0892	89	0.0858	85	70-130	4	35	mg/kg	08.04.18 03:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	128		127		70-130	%	08.04.18 03:22
4-Bromofluorobenzene	103		102		70-130	%	08.04.18 03:22

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

Page 1 Of 1

Revision 2016.1

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Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 594384

Client / Reporting Information

Company Name / Branch: LT Environmental
Company Address: 3300 N. "A" street, Building 1, Unit 103 Midland, Tx
Email: Abaker@LTEnv.com, (432) 704-5178 Phone No:
Project Contact: Adrian Baker
Samplers's Name: Garrett Green

Project Information

Project Name/Number: BEU 33 (01298068)
Project Location: Carlsbad, NM
Invoice To: XTO, Kyle Littrell
PO Number: 2RP-1905

Analytical Information

BTEX (8021) (only BTEX)
TPH (MRO)(GRO)(DRO) 8015
Chloride (300.00)

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	FS03	12'	7/30/18	1230	S	1								X	
2	FS04	12'	7/30/18	1030	S	1								X	
3	SW09	1'	7/30/18	1600	S	1								X	
4															
5															
6															
7															
8															
9															
10															

7/31/2018

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking # 772865107755

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Garrett Green	0930/07/31/2018			7/31 15:30	8/1/18 1300
2						
3						
4						
5						

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp: 3.2 IR | Thermo. Corr. Factor: 0.0

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

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.

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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: 08/01/2018 01:15:00 PM

Work Order #: 594384

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
#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: 08/02/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/02/2018
Jessica Kramer

Analytical Report 615311

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU 33 Battery

012918068

27-FEB-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)

27-FEB-19

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

Reference: XENCO Report No(s): **615311**
BEU 33 Battery
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) 615311. 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. 615311 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

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

Sample Cross Reference 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS02A	S	02-20-19 09:25	4 ft	615311-001
SS03A	S	02-20-19 09:35	4 ft	615311-002
SS04A	S	02-20-19 09:45	4 ft	615311-003
SS05A	S	02-20-19 10:10	4 ft	615311-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 Battery

Project ID: *012918068*
Work Order Number(s): *615311*

Report Date: *27-FEB-19*
Date Received: *02/21/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3080227 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected;
Samples affected are: 615311-003.

Batch: LBA-3080464 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 615311

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Battery

Project Id: 012918068
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Feb-21-19 12:50 pm
Report Date: 27-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	615311-001		615311-002		615311-003		615311-004					
	Field Id:	SS02A		SS03A		SS04A		SS05A					
	Depth:	4- ft		4- ft		4- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Feb-20-19 09:25		Feb-20-19 09:35		Feb-20-19 09:45		Feb-20-19 10:10					
BTEX by EPA 8021B	***Extracted:***	Feb-26-19 15:00		Feb-26-19 15:00		Feb-26-19 15:00		Feb-26-19 15:00					
	Analyzed:	Feb-27-19 03:21		Feb-27-19 03:40		Feb-27-19 03:59		Feb-27-19 04:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00399	0.00399	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Feb-22-19 15:30		Feb-22-19 15:30		Feb-22-19 15:30		Feb-22-19 15:30					
	Analyzed:	Feb-23-19 00:56		Feb-23-19 01:02		Feb-23-19 01:08		Feb-23-19 01:28					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.95	4.95	<4.99	4.99	<5.00	5.00	11.9	4.99				
TPH by SW8015 Mod	***Extracted:***	Feb-22-19 14:00		Feb-22-19 14:00		Feb-22-19 14:00		Feb-22-19 14:00					
	Analyzed:	Feb-23-19 00:24		Feb-23-19 00:44		Feb-23-19 01:03		Feb-23-19 01:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	67.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<14.9	14.9	<15.0	15.0	67.0	15.0	<15.0	15.0				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-001	Date Collected:	02.20.19 09.25	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.22.19 15.30	Basis:	Wet Weight
Seq Number:	3080225				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	02.23.19 00.56	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.22.19 14.00	Basis:	Wet Weight
Seq Number:	3080227				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.23.19 00.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.23.19 00.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.23.19 00.24	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.23.19 00.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.23.19 00.24	
o-Terphenyl	84-15-1	108	%	70-135	02.23.19 00.24	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-001	Date Collected:	02.20.19 09.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.26.19 15.00	Basis:	Wet Weight
Seq Number:	3080464				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.27.19 03.21	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.19 03.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.27.19 03.21	
4-Bromofluorobenzene	460-00-4	126	%	70-130	02.27.19 03.21	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-002	Date Collected:	02.20.19 09.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.22.19 15.30	Basis:	Wet Weight
Seq Number:	3080225				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.23.19 01.02	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.22.19 14.00	Basis:	Wet Weight
Seq Number:	3080227				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.23.19 00.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.23.19 00.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.23.19 00.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.19 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.23.19 00.44	
o-Terphenyl	84-15-1	98	%	70-135	02.23.19 00.44	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-002	Date Collected:	02.20.19 09.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.26.19 15.00	Basis:	Wet Weight
Seq Number:	3080464				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.27.19 03.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.27.19 03.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	02.27.19 03.40	
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.27.19 03.40	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-003	Date Collected:	02.20.19 09.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.22.19 15.30	Basis:	Wet Weight
Seq Number:	3080225				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.23.19 01.08	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.22.19 14.00	Basis:	Wet Weight
Seq Number:	3080227				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.23.19 01.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**67.0**	15.0	mg/kg	02.23.19 01.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.23.19 01.03	U	1
Total TPH	PHC635	**67.0**	15.0	mg/kg	02.23.19 01.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.23.19 01.03	
o-Terphenyl	84-15-1	0	%	70-135	02.23.19 01.03	**

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-003	Date Collected:	02.20.19 09.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.26.19 15.00	Basis:	Wet Weight
Seq Number:	3080464				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.19 03.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.19 03.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.27.19 03.59	
4-Bromofluorobenzene	460-00-4	126	%	70-130	02.27.19 03.59	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-004	Date Collected:	02.20.19 10.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.22.19 15.30	Basis:	Wet Weight
Seq Number:	3080225				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.9**	4.99	mg/kg	02.23.19 01.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.22.19 14.00	Basis:	Wet Weight
Seq Number:	3080227				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.23.19 01.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.23.19 01.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.23.19 01.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.19 01.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.23.19 01.23	
o-Terphenyl	84-15-1	93	%	70-135	02.23.19 01.23	

Certificate of Analytical Results 615311

LT Environmental, Inc., Arvada, CO

BEU 33 Battery

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	02.21.19 12.50
Lab Sample Id:	615311-004	Date Collected:	02.20.19 10.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.26.19 15.00	Basis:	Wet Weight
Seq Number:	3080464				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.27.19 04.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.27.19 04.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.27.19 04.18	
4-Bromofluorobenzene	460-00-4	114	%	70-130	02.27.19 04.18	

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 615311

LT Environmental, Inc.

BEU 33 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3080225 Matrix: Solid Date Prep: 02.22.19
MB Sample Id: 7672347-1-BLK LCS Sample Id: 7672347-1-BKS LCSD Sample Id: 7672347-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	250	100	257	103	90-110	3	20	mg/kg	02.23.19 00:19	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3080225 Matrix: Soil Date Prep: 02.22.19
Parent Sample Id: 615310-005 MS Sample Id: 615310-005 S MSD Sample Id: 615310-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	209	249	466	103	452	98	90-110	3	20	mg/kg	02.23.19 00:37	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3080225 Matrix: Soil Date Prep: 02.22.19
Parent Sample Id: 615312-006 MS Sample Id: 615312-006 S MSD Sample Id: 615312-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	112	248	357	99	348	95	90-110	3	20	mg/kg	02.23.19 02:05	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3080227 Matrix: Solid Date Prep: 02.22.19
MB Sample Id: 7672374-1-BLK LCS Sample Id: 7672374-1-BKS LCSD Sample Id: 7672374-1-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	933	93	915	92	70-135	2	20	mg/kg	02.22.19 21:27	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	990	99	70-135	4	20	mg/kg	02.22.19 21:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		121		130		70-135	%	02.22.19 21:27
o-Terphenyl	104		109		125		70-135	%	02.22.19 21:27

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 615311

LT Environmental, Inc.

BEU 33 Battery

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3080227 | Matrix: Soil | Date Prep: 02.22.19
Parent Sample Id: 615310-001 | MS Sample Id: 615310-001 S | MSD Sample Id: 615310-001 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)	8.49	999	909	90	914	91	70-135	1	20	mg/kg	02.22.19 22:25	
Diesel Range Organics (DRO)	52.5	999	998	95	1020	97	70-135	2	20	mg/kg	02.22.19 22:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	02.22.19 22:25
o-Terphenyl	120		100		70-135	%	02.22.19 22:25

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3080464 | Matrix: Solid | Date Prep: 02.26.19
MB Sample Id: 7672577-1-BLK | LCS Sample Id: 7672577-1-BKS | LCSD Sample Id: 7672577-1-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	0.121	121	0.123	123	70-130	2	35	mg/kg	02.26.19 23:54	
Toluene	<0.000457	0.100	0.105	105	0.106	106	70-130	1	35	mg/kg	02.26.19 23:54	
Ethylbenzene	<0.000567	0.100	0.100	100	0.101	101	70-130	1	35	mg/kg	02.26.19 23:54	
m,p-Xylenes	<0.00102	0.201	0.200	100	0.200	100	70-130	0	35	mg/kg	02.26.19 23:54	
o-Xylene	<0.000346	0.100	0.100	100	0.101	101	70-130	1	35	mg/kg	02.26.19 23:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		109		70-130	%	02.26.19 23:54
4-Bromofluorobenzene	97		100		100		70-130	%	02.26.19 23:54

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3080464 | Matrix: Soil | Date Prep: 02.26.19
Parent Sample Id: 615310-003 | MS Sample Id: 615310-003 S | MSD Sample Id: 615310-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0977	98	0.105	105	70-130	7	35	mg/kg	02.27.19 00:32	
Toluene	<0.000454	0.0996	0.0814	82	0.0867	87	70-130	6	35	mg/kg	02.27.19 00:32	
Ethylbenzene	<0.000563	0.0996	0.0719	72	0.0769	77	70-130	7	35	mg/kg	02.27.19 00:32	
m,p-Xylenes	<0.00101	0.199	0.145	73	0.155	78	70-130	7	35	mg/kg	02.27.19 00:32	
o-Xylene	0.000393	0.0996	0.0738	74	0.0787	78	70-130	6	35	mg/kg	02.27.19 00:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		110		70-130	%	02.27.19 00:32
4-Bromofluorobenzene	103		102		70-130	%	02.27.19 00:32

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

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

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

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

Final 1.000

Chain of Custody

Work Order No: 615311

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:	3104 E. Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178/575 200 6754	Email:	abaker@ltenv.com / abyers@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 33 Battery	Turn Around	
Project Number:	012918068	Routine	☒
P.O. Number:	2RP1905	Rush:	
Sampler's Name:	Anna Byers	Due Date:	5 days

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5/0.4	Thermometer ID:	IR
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)
SS02A	S	2/20	0925	4'	1	X	X	X
SS03A	S	2/20	0935	4'	1	X	X	X
SS04A	S	2/20	0945	4'	1	X	X	X
SS5A	S	2/20	1010	4'	1	X	X	X

AB 02/20/19

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	Anna Byers		2/20/19 @ 1320	2		
3				4		2/21/19 1250
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/21/2019 12:50:00 PM

Work Order #: 615311

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**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: 02/21/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/21/2019
Jessica Kramer

Analytical Report 621156

for

LT Environmental, Inc.

Project Manager: Adrian Baker

BEU33

23-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

23-APR-19

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

Reference: XENCO Report No(s): **621156**
BEU33
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) 621156. 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. 621156 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

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

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

Sample Cross Reference 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	04-11-19 09:20	1 ft	621156-001
BH01A	S	04-11-19 10:10	8 ft	621156-002
BH02	S	04-11-19 10:30	1 ft	621156-003
BH02A	S	04-11-19 10:35	2 ft	621156-004
BH03	S	04-11-19 12:35	1 ft	621156-005
BH03A	S	04-11-19 12:40	2 ft	621156-006
PH01	S	04-11-19 13:30	3 ft	621156-007
PH01A	S	04-11-19 13:50	6 ft	621156-008
PH02	S	04-11-19 14:30	1 ft	621156-009
PH02A	S	04-11-19 14:50	4 ft	621156-010
PH03	S	04-11-19 14:10	1 ft	621156-011
PH03A	S	04-11-19 14:15	4 ft	621156-012
PH04	S	04-11-19 15:00	1 ft	621156-013
PH04A	S	04-11-19 15:10	4 ft	621156-014

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU33

Project ID: ---
Work Order Number(s): *621156*

Report Date: *23-APR-19*
Date Received: *04/15/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3086248 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3086477 Chloride by EPA 300
Chloride Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 621156-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013

Lab Sample ID 621156-005 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: 621156-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3086557 Chloride by EPA 300
Chloride Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 621156-014

Lab Sample ID 621815-036 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: 621156-014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 621156

LT Environmental, Inc., Arvada, CO

Project Name: BEU33

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

Date Received in Lab: Mon Apr-15-19 03:20 pm
Report Date: 23-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621156-001		621156-002		621156-003		621156-004		621156-005		621156-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	1- ft		8- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-11-19 09:20		Apr-11-19 10:10		Apr-11-19 10:30		Apr-11-19 10:35		Apr-11-19 12:35		Apr-11-19 12:40	
BTEX by EPA 8021B	***Extracted:***	Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00	
	Analyzed:	Apr-19-19 01:32		Apr-19-19 01:51		Apr-19-19 02:10		Apr-19-19 02:29		Apr-19-19 02:48		Apr-19-19 04:21	
	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	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00	
	Analyzed:	Apr-19-19 22:53		Apr-19-19 21:42		Apr-19-19 23:00		Apr-19-19 23:06		Apr-19-19 23:12		Apr-19-19 23:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		637	4.99	375	5.03	1100	24.8	298	4.98	8.76	4.95	6.44	4.99
TPH by SW8015 Mod	***Extracted:***	Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00	
	Analyzed:	Apr-17-19 18:50		Apr-17-19 19:49		Apr-17-19 20:08		Apr-17-19 20:28		Apr-17-19 20:47		Apr-17-19 21:07	
	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	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		290	15.0	22.3	15.0	1510	15.0	24.1	15.0	48.4	14.9	327	15.0
Motor Oil Range Hydrocarbons (MRO)		64.3	15.0	<15.0	15.0	414	15.0	<15.0	15.0	18.9	14.9	112	15.0
Total TPH		354	15.0	22.3	15.0	1920	15.0	24.1	15.0	67.3	14.9	439	15.0
Total GRO-DRO		290	15.0	22.3	15.0	1510	15.0	24.1	15.0	48.4	14.9	327	15.0

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Kalei Stout
Midland Laboratory Director

Final 1.000

Certificate of Analysis Summary 621156

LT Environmental, Inc., Arvada, CO

Project Name: BEU33

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

Date Received in Lab: Mon Apr-15-19 03:20 pm
Report Date: 23-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	621156-007		621156-008		621156-009		621156-010		621156-011		621156-012	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	3- ft		6- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-11-19 13:30		Apr-11-19 13:50		Apr-11-19 14:30		Apr-11-19 14:50		Apr-11-19 14:10		Apr-11-19 14:15	
BTEX by EPA 8021B	***Extracted:***	Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00		Apr-18-19 17:00	
	Analyzed:	Apr-19-19 04:40		Apr-19-19 04:59		Apr-19-19 05:18		Apr-19-19 05:37		Apr-19-19 05:56		Apr-19-19 06:15	
	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	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402	<0.00398	0.00398	<0.00403	0.00403	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00		Apr-19-19 15:00	
	Analyzed:	Apr-19-19 23:38		Apr-19-19 23:58		Apr-20-19 00:04		Apr-20-19 00:11		Apr-20-19 00:17		Apr-20-19 00:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1450	24.9	292	5.00	89.5	5.04	72.9	4.96	111	5.01	169	5.03
TPH by SW8015 Mod	***Extracted:***	Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00		Apr-17-19 16:00		Apr-16-19 10:00		Apr-16-19 10:00	
	Analyzed:	Apr-17-19 21:26		Apr-17-19 21:45		Apr-17-19 22:05		Apr-17-19 22:24		Apr-16-19 18:59		Apr-16-19 19:19	
	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	<15.0	15.0	26.8	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	26.8	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	26.8	15.0	<15.0	15.0

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Kalei Stout
Midland Laboratory Director

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Certificate of Analysis Summary 621156

LT Environmental, Inc., Arvada, CO

Project Name: BEU33

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

Date Received in Lab: Mon Apr-15-19 03:20 pm
Report Date: 23-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	621156-013		621156-014					
	Field Id:	PH04		PH04A					
	Depth:	1- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-11-19 15:00		Apr-11-19 15:10					
BTEX by EPA 8021B	***Extracted:***	Apr-18-19 17:00		Apr-18-19 17:00					
	Analyzed:	Apr-19-19 06:34		Apr-19-19 06:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199				
Toluene		<0.00201	0.00201	<0.00199	0.00199				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	Apr-19-19 15:00		Apr-22-19 16:00					
	Analyzed:	Apr-20-19 00:30		Apr-22-19 20:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.00	5.00	9.98	4.95				
TPH by SW8015 Mod	***Extracted:***	Apr-16-19 10:00		Apr-16-19 10:00					
	Analyzed:	Apr-16-19 19:39		Apr-16-19 19:58					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				
Total GRO-DRO		<15.0	15.0	<15.0	15.0				

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

Kalei Stout
Midland Laboratory Director

Final 1.000

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-001	Date Collected:	04.11.19 09.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**637**	4.99	mg/kg	04.19.19 22.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 18.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**290**	15.0	mg/kg	04.17.19 18.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**64.3**	15.0	mg/kg	04.17.19 18.50		1
Total TPH	PHC635	**354**	15.0	mg/kg	04.17.19 18.50		1
Total GRO-DRO	PHC628	**290**	15.0	mg/kg	04.17.19 18.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.17.19 18.50	
o-Terphenyl	84-15-1	110	%	70-135	04.17.19 18.50	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-001	Date Collected:	04.11.19 09.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 01.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 01.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 01.32	
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.19.19 01.32	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-002	Date Collected:	04.11.19 10.10	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**375**	5.03	mg/kg	04.19.19 21.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 19.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.3**	15.0	mg/kg	04.17.19 19.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 19.49	U	1
Total TPH	PHC635	**22.3**	15.0	mg/kg	04.17.19 19.49		1
Total GRO-DRO	PHC628	**22.3**	15.0	mg/kg	04.17.19 19.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.17.19 19.49	
o-Terphenyl	84-15-1	102	%	70-135	04.17.19 19.49	

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LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-002	Date Collected:	04.11.19 10.10	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.19.19 01.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 01.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.19.19 01.51	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 01.51	

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Sample Id:	**BH02**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-003	Date Collected:	04.11.19 10.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1100**	24.8	mg/kg	04.19.19 23.00		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 20.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1510**	15.0	mg/kg	04.17.19 20.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**414**	15.0	mg/kg	04.17.19 20.08		1
Total TPH	PHC635	**1920**	15.0	mg/kg	04.17.19 20.08		1
Total GRO-DRO	PHC628	**1510**	15.0	mg/kg	04.17.19 20.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.17.19 20.08	
o-Terphenyl	84-15-1	120	%	70-135	04.17.19 20.08	

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BEU33

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-003	Date Collected:	04.11.19 10.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.19.19 02.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.19.19 02.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 02.10	
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.19.19 02.10	

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Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-004	Date Collected:	04.11.19 10.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**298**	4.98	mg/kg	04.19.19 23.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 20.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**24.1**	15.0	mg/kg	04.17.19 20.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 20.28	U	1
Total TPH	PHC635	**24.1**	15.0	mg/kg	04.17.19 20.28		1
Total GRO-DRO	PHC628	**24.1**	15.0	mg/kg	04.17.19 20.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 20.28	
o-Terphenyl	84-15-1	101	%	70-135	04.17.19 20.28	

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Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-004	Date Collected:	04.11.19 10.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 02.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.19.19 02.29	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.19.19 02.29	

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Sample Id:	**BH03**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-005	Date Collected:	04.11.19 12.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.76**	4.95	mg/kg	04.19.19 23.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.17.19 20.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**48.4**	14.9	mg/kg	04.17.19 20.47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.9**	14.9	mg/kg	04.17.19 20.47		1
Total TPH	PHC635	**67.3**	14.9	mg/kg	04.17.19 20.47		1
Total GRO-DRO	PHC628	**48.4**	14.9	mg/kg	04.17.19 20.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.17.19 20.47	
o-Terphenyl	84-15-1	96	%	70-135	04.17.19 20.47	

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Sample Id:	**BH03**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-005	Date Collected:	04.11.19 12.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.19.19 02.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 02.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	04.19.19 02.48	
1,4-Difluorobenzene	540-36-3	87	%	70-130	04.19.19 02.48	

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BEU33

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-006	Date Collected:	04.11.19 12.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.44**	4.99	mg/kg	04.19.19 23.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 21.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**327**	15.0	mg/kg	04.17.19 21.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**112**	15.0	mg/kg	04.17.19 21.07		1
Total TPH	PHC635	**439**	15.0	mg/kg	04.17.19 21.07		1
Total GRO-DRO	PHC628	**327**	15.0	mg/kg	04.17.19 21.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 21.07	
o-Terphenyl	84-15-1	105	%	70-135	04.17.19 21.07	

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LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-006	Date Collected:	04.11.19 12.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.19.19 04.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 04.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.19.19 04.21	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.19.19 04.21	

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BEU33

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-007	Date Collected:	04.11.19 13.30	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1450**	24.9	mg/kg	04.19.19 23.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 21.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 21.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 21.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 21.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 21.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 21.26	
o-Terphenyl	84-15-1	101	%	70-135	04.17.19 21.26	

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BEU33

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-007	Date Collected:	04.11.19 13.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.19.19 04.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.19.19 04.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	04.19.19 04.40	
1,4-Difluorobenzene	540-36-3	82	%	70-130	04.19.19 04.40	

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BEU33

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-008	Date Collected:	04.11.19 13.50	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**292**	5.00	mg/kg	04.19.19 23.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.17.19 21.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.17.19 21.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.17.19 21.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.17.19 21.45	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.17.19 21.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.17.19 21.45	
o-Terphenyl	84-15-1	98	%	70-135	04.17.19 21.45	

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Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-008	Date Collected:	04.11.19 13.50	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.19.19 04.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.19.19 04.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.19.19 04.59	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 04.59	

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BEU33

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-009	Date Collected:	04.11.19 14.30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.5**	5.04	mg/kg	04.20.19 00.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 22.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 22.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 22.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 22.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.17.19 22.05	
o-Terphenyl	84-15-1	99	%	70-135	04.17.19 22.05	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-009	Date Collected:	04.11.19 14.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 05.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 05.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.19.19 05.18	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 05.18	

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LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-010	Date Collected:	04.11.19 14.50	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.9**	4.96	mg/kg	04.20.19 00.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.17.19 16.00	Basis:	Wet Weight
Seq Number:	3086103				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 22.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 22.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 22.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 22.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 22.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.17.19 22.24	
o-Terphenyl	84-15-1	96	%	70-135	04.17.19 22.24	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-010	Date Collected:	04.11.19 14.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.19.19 05.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.19.19 05.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 05.37	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.19.19 05.37	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-011	Date Collected:	04.11.19 14.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**111**	5.01	mg/kg	04.20.19 00.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.16.19 10.00	Basis:	Wet Weight
Seq Number:	3085985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**26.8**	15.0	mg/kg	04.16.19 18.59		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 18.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 18.59	U	1
Total TPH	PHC635	**26.8**	15.0	mg/kg	04.16.19 18.59		1
Total GRO-DRO	PHC628	**26.8**	15.0	mg/kg	04.16.19 18.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	04.16.19 18.59	
o-Terphenyl	84-15-1	109	%	70-135	04.16.19 18.59	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-011	Date Collected:	04.11.19 14.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 05.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 05.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.19.19 05.56	
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.19.19 05.56	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-012	Date Collected:	04.11.19 14.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**169**	5.03	mg/kg	04.20.19 00.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.16.19 10.00	Basis:	Wet Weight
Seq Number:	3085985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 19.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 19.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 19.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 19.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.16.19 19.19	
o-Terphenyl	84-15-1	101	%	70-135	04.16.19 19.19	

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LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-012	Date Collected:	04.11.19 14.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.19.19 06.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 06.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 06.15	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.19.19 06.15	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-013	Date Collected:	04.11.19 15.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.19.19 15.00	Basis:	Wet Weight
Seq Number:	3086477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	04.20.19 00.30	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.16.19 10.00	Basis:	Wet Weight
Seq Number:	3085985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 19.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 19.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 19.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 19.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.16.19 19.39	
o-Terphenyl	84-15-1	96	%	70-135	04.16.19 19.39	

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LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-013	Date Collected:	04.11.19 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.19.19 06.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.19.19 06.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.19.19 06.34	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 06.34	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-014	Date Collected:	04.11.19 15.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.22.19 16.00	Basis:	Wet Weight
Seq Number:	3086557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.98**	4.95	mg/kg	04.22.19 20.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.16.19 10.00	Basis:	Wet Weight
Seq Number:	3085985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 19.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 19.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 19.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 19.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 19.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.16.19 19.58	
o-Terphenyl	84-15-1	98	%	70-135	04.16.19 19.58	

Certificate of Analytical Results 621156

LT Environmental, Inc., Arvada, CO

BEU33

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	04.15.19 15.20
Lab Sample Id:	621156-014	Date Collected:	04.11.19 15.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.18.19 17.00	Basis:	Wet Weight
Seq Number:	3086248				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 06.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 06.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.19.19 06.53	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.19.19 06.53	

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 621156

LT Environmental, Inc.

BEU33

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3086477 — Matrix: Solid — Date Prep: 04.19.19
MB Sample Id: 7676197-1-BLK — LCS Sample Id: 7676197-1-BKS — LCSD Sample Id: 7676197-1-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	251	100	256	102	90-110	2	20	mg/kg	04.19.19 21:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3086557 — Matrix: Solid — Date Prep: 04.22.19
MB Sample Id: 7676298-1-BLK — LCS Sample Id: 7676298-1-BKS — LCSD Sample Id: 7676298-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	254	102	90-110	1	20	mg/kg	04.22.19 20:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3086477 — Matrix: Soil — Date Prep: 04.19.19
Parent Sample Id: 621156-002 — MS Sample Id: 621156-002 S — MSD Sample Id: 621156-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	375	252	567	76	573	79	90-110	1	20	mg/kg	04.19.19 21:49	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3086477 — Matrix: Soil — Date Prep: 04.19.19
Parent Sample Id: 621156-005 — MS Sample Id: 621156-005 S — MSD Sample Id: 621156-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.76	248	176	67	245	95	90-110	33	20	mg/kg	04.19.19 23:19	XF

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3086557 — Matrix: Soil — Date Prep: 04.22.19
Parent Sample Id: 621156-014 — MS Sample Id: 621156-014 S — MSD Sample Id: 621156-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.98	248	176	67	244	94	90-110	32	20	mg/kg	04.22.19 20:32	XF

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 621156

LT Environmental, Inc.

BEU33

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3086557 Matrix: Soil Date Prep: 04.22.19
Parent Sample Id: 621815-036 MS Sample Id: 621815-036 S MSD Sample Id: 621815-036 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	142	252	320	71	381	95	90-110	17	20	mg/kg	04.22.19 21:59	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085985 Matrix: Solid Date Prep: 04.16.19
MB Sample Id: 7675908-1-BLK LCS Sample Id: 7675908-1-BKS LCSD Sample Id: 7675908-1-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	975	98	1010	101	70-135	4	20	mg/kg	04.16.19 11:51	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1020	102	70-135	2	20	mg/kg	04.16.19 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		126		129		70-135	%	04.16.19 11:51
o-Terphenyl	114		119		125		70-135	%	04.16.19 11:51

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3086103 Matrix: Solid Date Prep: 04.17.19
MB Sample Id: 7675990-1-BLK LCS Sample Id: 7675990-1-BKS LCSD Sample Id: 7675990-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1060	106	1010	101	70-135	5	20	mg/kg	04.17.19 18:11	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1060	106	70-135	5	20	mg/kg	04.17.19 18:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		126		122		70-135	%	04.17.19 18:11
o-Terphenyl	118		118		124		70-135	%	04.17.19 18:11

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3085985 Matrix: Soil Date Prep: 04.16.19
Parent Sample Id: 621042-001 MS Sample Id: 621042-001 S MSD Sample Id: 621042-001 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)	12.3	997	1010	100	1020	101	70-135	1	20	mg/kg	04.16.19 12:49	
Diesel Range Organics (DRO)	<8.10	997	1070	107	1080	108	70-135	1	20	mg/kg	04.16.19 12:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		125		70-135	%	04.16.19 12:49
o-Terphenyl	114		121		70-135	%	04.16.19 12:49

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 621156

LT Environmental, Inc.

BEU33

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3086103 | Matrix: Soil | Date Prep: 04.17.19
Parent Sample Id: 621156-001 | MS Sample Id: 621156-001 S | MSD Sample Id: 621156-001 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)	8.88	1000	1040	103	1040	103	70-135	0	20	mg/kg	04.17.19 19:09	
Diesel Range Organics (DRO)	290	1000	1260	97	1270	98	70-135	1	20	mg/kg	04.17.19 19:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		120		70-135	%	04.17.19 19:09
o-Terphenyl	114		112		70-135	%	04.17.19 19:09

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3086248 | Matrix: Solid | Date Prep: 04.18.19
MB Sample Id: 7676134-1-BLK | LCS Sample Id: 7676134-1-BKS | LCSD Sample Id: 7676134-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.0858	86	0.0851	85	70-130	1	35	mg/kg	04.18.19 22:24	
Toluene	<0.000452	0.0992	0.0866	87	0.0854	85	70-130	1	35	mg/kg	04.18.19 22:24	
Ethylbenzene	<0.000560	0.0992	0.0798	80	0.0782	78	70-130	2	35	mg/kg	04.18.19 22:24	
m,p-Xylenes	<0.00101	0.198	0.157	79	0.155	77	70-130	1	35	mg/kg	04.18.19 22:24	
o-Xylene	<0.000342	0.0992	0.0811	82	0.0812	81	70-130	0	35	mg/kg	04.18.19 22:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		100		70-130	%	04.18.19 22:24
4-Bromofluorobenzene	86		89		95		70-130	%	04.18.19 22:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3086248 | Matrix: Soil | Date Prep: 04.18.19
Parent Sample Id: 621152-001 | MS Sample Id: 621152-001 S | MSD Sample Id: 621152-001 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	0.0780	78	0.0821	82	70-130	5	35	mg/kg	04.18.19 23:02	
Toluene	<0.000455	0.0998	0.0776	78	0.0820	82	70-130	6	35	mg/kg	04.18.19 23:02	
Ethylbenzene	<0.000564	0.0998	0.0702	70	0.0743	74	70-130	6	35	mg/kg	04.18.19 23:02	
m,p-Xylenes	<0.00101	0.200	0.139	70	0.147	74	70-130	6	35	mg/kg	04.18.19 23:02	
o-Xylene	<0.000344	0.0998	0.0707	71	0.0750	75	70-130	6	35	mg/kg	04.18.19 23:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	04.18.19 23:02
4-Bromofluorobenzene	97		100		70-130	%	04.18.19 23:02

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

Chain of Custody

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

Work Order No: 621156

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 ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ ST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	BEU 33	Turn Around	
Project Number:		Routine	☑
P.O. Number:	2RP-1905	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	04/11/19	0920	1'	1	X	X	X
BH01A	S		1010	8'	1			
BH02	S		1030	1'	1			
BH02A	S		1035	2'	1			
BH03	S		1235	1'	1			
BH03A	S		1240	2'	1			
PH01	S		1330	2'	1			
PH01A	S		1350	8'	1			
PH02B	S		1430	1'	1			
PH02A	S	↓	1450	4'	1	↓	↓	↓

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	Garrett Green	Cristina P	4/12/19 1730	2 Cristina P	Brad	4/15/19 15:2
3				4		
5				6		

Chain of Custody

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

Work Order No: 621156

Page 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Liffrell
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 ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	BEU 33	Turn Around	
Project Number:		Routine	☑
P.O. Number:	2RP-1905	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH03	S	04/11/19	1410	1'	1	X	X	X
PH03a	S		1415	4'	1			
PH04	S		1500	1'	1			
PH04a	S		1510	4'	1			

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/12/19 1930	2		4/15/19 15:2
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/15/2019 03:20:00 PM

Work Order #: 621156

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: 04/15/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/16/2019

Kalei Stout

Analytical Report 637404

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 33 Tank Battery

012918068

23-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

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

23-SEP-19

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

Reference: XENCO Report No(s): **637404**
BEU 33 Tank Battery
Project Address: Rural Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637404. 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. 637404 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH05	S	09-17-19 10:00	1 ft	637404-001
PH05A	S	09-17-19 10:15	4 ft	637404-002
PH06	S	09-17-19 10:35	2 ft	637404-003
PH06A	S	09-17-19 10:45	4 ft	637404-004
PH07	S	09-17-19 11:05	3 ft	637404-005
PH07A	S	09-17-19 11:10	4 ft	637404-006
BH04	S	09-17-19 17:05	1 ft	637404-007
BH04A	S	09-17-19 17:15	4 ft	637404-008
BH05	S	09-17-19 17:20	1 ft	637404-009
BH05A	S	09-17-19 17:30	4 ft	637404-010

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 Tank Battery

Project ID: *012918068*
Work Order Number(s): *637404*

Report Date: *23-SEP-19*
Date Received: *09/19/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102054 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3102099 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637404-001,637404-006,637404-004.

Certificate of Analysis Summary 637404

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Tank Battery

Project Id: 012918068
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	637404-001		637404-002		637404-003		637404-004		637404-005		637404-006	
	Field Id:	PH05		PH05A		PH06		PH06A		PH07		PH07A	
	Depth:	1- ft		4- ft		2- ft		4- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-17-19 10:00		Sep-17-19 10:15		Sep-17-19 10:35		Sep-17-19 10:45		Sep-17-19 11:05		Sep-17-19 11:10	
BTEX by EPA 8021B	*Extracted:*	Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00	
	Analyzed:	Sep-19-19 18:37		Sep-19-19 18:57		Sep-19-19 19:17		Sep-19-19 19:37		Sep-19-19 19:57		Sep-19-19 20:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
Toluene		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
Ethylbenzene		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
m,p-Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202
o-Xylene		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
Total Xylenes		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
Total BTEX		<0.000990	0.000990	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.00101	0.00101
Chloride by EPA 300	*Extracted:*	Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09	
	Analyzed:	Sep-19-19 16:56		Sep-19-19 18:20		Sep-19-19 18:41		Sep-19-19 18:47		Sep-19-19 18:54		Sep-19-19 19:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.98	9.98	<9.88	9.88	286 D	19.7	400 D	19.8	102	9.84	146	9.88
TPH by SW8015 Mod	*Extracted:*	Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09	
	Analyzed:	Sep-20-19 22:07		Sep-20-19 22:28		Sep-20-19 22:48		Sep-20-19 23:08		Sep-20-19 23:29		Sep-20-19 23:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 637404

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Tank Battery

Project Id: 012918068
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	637404-007		637404-008		637404-009		637404-010					
	Field Id:	BH04		BH04A		BH05		BH05A					
	Depth:	1- ft		4- ft		1- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Sep-17-19 17:05		Sep-17-19 17:15		Sep-17-19 17:20		Sep-17-19 17:30					
BTEX by EPA 8021B	***Extracted:***	Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00					
	Analyzed:	Sep-19-19 20:37		Sep-19-19 21:36		Sep-19-19 21:55		Sep-19-19 22:15					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
Toluene		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
Ethylbenzene		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
m,p-Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201				
o-Xylene		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
Total Xylenes		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
Total BTEX		<0.000996	0.000996	<0.00101	0.00101	<0.00101	0.00101	<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09					
	Analyzed:	Sep-19-19 19:20		Sep-19-19 19:26		Sep-19-19 19:33		Sep-19-19 19:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<9.86	9.86	12.6	9.88	<9.84	9.84	<9.86	9.86				
TPH by SW8015 Mod	***Extracted:***	Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09					
	Analyzed:	Sep-21-19 00:10		Sep-21-19 00:50		Sep-21-19 01:11		Sep-21-19 01:31					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0				
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0				
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-001	Date Collected:	09.17.19 10.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	09.19.19 16.56	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 22.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 22.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 22.07	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 22.07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	09.20.19 22.07	**
o-Terphenyl	84-15-1	120	%	70-135	09.20.19 22.07	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-001	Date Collected:	09.17.19 10.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.19.19 18.37	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1
Total BTEX		<0.000990	0.000990	mg/kg	09.19.19 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	09.19.19 18.37	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.19.19 18.37	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-002	Date Collected:	09.17.19 10.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	09.19.19 18.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 22.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 22.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 22.28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 22.28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 22.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	09.20.19 22.28	
o-Terphenyl	84-15-1	116	%	70-135	09.20.19 22.28	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-002	Date Collected:	09.17.19 10.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.19.19 18.57	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.19.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	09.19.19 18.57	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.19.19 18.57	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-003	Date Collected:	09.17.19 10.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**286**	19.7	mg/kg	09.20.19 10.56	D	2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 22.48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 22.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.20.19 22.48	
o-Terphenyl	84-15-1	135	%	70-135	09.20.19 22.48	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-003	Date Collected:	09.17.19 10.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 19.17	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 19.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.19.19 19.17	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.19.19 19.17	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-004	Date Collected:	09.17.19 10.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**400**	19.8	mg/kg	09.20.19 11.02	D	2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 23.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 23.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 23.08	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 23.08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 23.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	144	%	70-135	09.20.19 23.08	**
o-Terphenyl	84-15-1	117	%	70-135	09.20.19 23.08	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-004	Date Collected:	09.17.19 10.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.19.19 19.37	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.19.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.19.19 19.37	
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.19.19 19.37	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-005	Date Collected:	09.17.19 11.05	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**102**	9.84	mg/kg	09.19.19 18.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 23.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 23.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 23.29	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 23.29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 23.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	09.20.19 23.29	
o-Terphenyl	84-15-1	127	%	70-135	09.20.19 23.29	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-005	Date Collected:	09.17.19 11.05	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 19.57	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 19.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.19.19 19.57	
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.19.19 19.57	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-006	Date Collected:	09.17.19 11.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	9.88	mg/kg	09.19.19 19.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 23.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 23.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 23.49	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.20.19 23.49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 23.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	142	%	70-135	09.20.19 23.49	**
o-Terphenyl	84-15-1	124	%	70-135	09.20.19 23.49	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-006	Date Collected:	09.17.19 11.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 20.17	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 20.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.19.19 20.17	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.19.19 20.17	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-007	Date Collected:	09.17.19 17.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	09.19.19 19.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 00.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 00.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 00.10	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 00.10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	131	%	70-135	09.21.19 00.10	
o-Terphenyl	84-15-1	114	%	70-135	09.21.19 00.10	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-007	Date Collected:	09.17.19 17.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.19.19 20.37	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.19.19 20.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.19.19 20.37	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.19.19 20.37	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-008	Date Collected:	09.17.19 17.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.6**	9.88	mg/kg	09.19.19 19.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 00.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 00.50	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 00.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 00.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	09.21.19 00.50	
o-Terphenyl	84-15-1	129	%	70-135	09.21.19 00.50	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-008	Date Collected:	09.17.19 17.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 21.36	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	09.19.19 21.36	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.19.19 21.36	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-009	Date Collected:	09.17.19 17.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.84	9.84	mg/kg	09.19.19 19.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 01.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 01.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 01.11	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 01.11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 01.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	09.21.19 01.11	
o-Terphenyl	84-15-1	125	%	70-135	09.21.19 01.11	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-009	Date Collected:	09.17.19 17.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 21.55	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	09.19.19 21.55	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.19.19 21.55	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-010	Date Collected:	09.17.19 17.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	09.19.19 19.39	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 01.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 01.31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 01.31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.21.19 01.31	
o-Terphenyl	84-15-1	125	%	70-135	09.21.19 01.31	

Certificate of Analytical Results 637404

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637404-010	Date Collected:	09.17.19 17.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.19.19 22.15	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 22.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	09.19.19 22.15	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.19.19 22.15	

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 637404

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Solid Date Prep: 09.19.19
MB Sample Id: 7686516-1-BLK LCS Sample Id: 7686516-1-BKS LCSD Sample Id: 7686516-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	257	103	90-110	0	20	mg/kg	09.19.19 16:43	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Soil Date Prep: 09.19.19
Parent Sample Id: 637404-001 MS Sample Id: 637404-001 S MSD Sample Id: 637404-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.83	199	211	103	219	107	90-110	4	20	mg/kg	09.19.19 17:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Solid Date Prep: 09.19.19
Parent Sample Id: 637407-001 MS Sample Id: 637407-001 S MSD Sample Id: 637407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.89	199	219	106	207	100	90-110	6	20	mg/kg	09.19.19 19:52	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102099 Matrix: Solid Date Prep: 09.20.19
MB Sample Id: 7686610-1-BLK LCS Sample Id: 7686610-1-BKS LCSD Sample Id: 7686610-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1010	101	956	96	70-135	5	35	mg/kg	09.20.19 19:45	
Diesel Range Organics (DRO)	<15.0	1000	1220	122	1110	111	70-135	9	35	mg/kg	09.20.19 19:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		95		127		70-135	%	09.20.19 19:45
o-Terphenyl	123		122		123		70-135	%	09.20.19 19:45

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

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

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

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

Final 1.000

QC Summary 637404

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102099 — Matrix: Soil — Date Prep: 09.20.19
Parent Sample Id: 637399-001 — MS Sample Id: 637399-001 S — MSD Sample Id: 637399-001 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)	<15.0	1000	918	92	949	95	70-135	3	35	mg/kg	09.20.19 20:46	
Diesel Range Organics (DRO)	253	1000	1210	96	1300	105	70-135	7	35	mg/kg	09.20.19 20:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	09.20.19 20:46
o-Terphenyl	115		89		70-135	%	09.20.19 20:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3102054 — Matrix: Solid — Date Prep: 09.19.19
MB Sample Id: 7686609-1-BLK — LCS Sample Id: 7686609-1-BKS — LCSD Sample Id: 7686609-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0918	92	0.0859	86	70-130	7	35	mg/kg	09.19.19 15:39	
Toluene	<0.000500	0.100	0.0894	89	0.0879	88	70-130	2	35	mg/kg	09.19.19 15:39	
Ethylbenzene	<0.00100	0.100	0.111	111	0.110	110	71-129	1	35	mg/kg	09.19.19 15:39	
m,p-Xylenes	<0.00100	0.200	0.228	114	0.223	112	70-135	2	35	mg/kg	09.19.19 15:39	
o-Xylene	<0.000500	0.100	0.112	112	0.110	110	71-133	2	35	mg/kg	09.19.19 15:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		113		91		70-130	%	09.19.19 15:39
4-Bromofluorobenzene	108		126		102		70-130	%	09.19.19 15:39

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3102054 — Matrix: Soil — Date Prep: 09.19.19
Parent Sample Id: 637399-001 — MS Sample Id: 637399-001 S — MSD Sample Id: 637399-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0808	82	0.0850	85	70-130	5	35	mg/kg	09.19.19 16:58	
Toluene	<0.000990	0.0990	0.0866	87	0.0902	90	70-130	4	35	mg/kg	09.19.19 16:58	
Ethylbenzene	<0.000990	0.0990	0.0888	90	0.0903	90	71-129	2	35	mg/kg	09.19.19 16:58	
m,p-Xylenes	<0.000990	0.198	0.179	90	0.181	91	70-135	1	35	mg/kg	09.19.19 16:58	
o-Xylene	<0.000495	0.0990	0.0877	89	0.0890	89	71-133	1	35	mg/kg	09.19.19 16:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	09.19.19 16:58
4-Bromofluorobenzene	96		97		70-130	%	09.19.19 16:58

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

Chain of Custody

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 637404

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	BEU 33 Tank Battery	Turn Around	
Project Number:	012918068	Routine ☐	
Project Location	Rural Eddy County	Rush: 24 hr	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	22P-1905	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.2	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	10

Preservative Codes

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

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH05	S	9/17/19	1000	1'	1				
	PH05A	S		1015	4'	1				
	PH06	S		1035	2'	1				
	PH06A	S		1045	4'	1				
	PH07	S		1105	3'	1				
	PH07A	S		1110	4'	1				
	BH04	S		1705	1.0'	1				
	BH04A	S		1715	4'	1				
	BH05	S		1720	1'	1				
	BH05A	S		1730	4'	1				

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		9/19/19 10:50	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/19/2019 10:50:00 AM

Work Order #: 637404

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/19/2019

Checklist reviewed by: Jessica Kramer Date: 09/20/2019

Jessica Kramer

Analytical Report 637399

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 33 Tank Battery

012918068

23-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

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

23-SEP-19

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

Reference: XENCO Report No(s): **637399**
BEU 33 Tank Battery
Project Address: Rural Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637399. 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. 637399 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW14	S	09-18-19 14:15	0.5 - 2 ft	637399-001
FS06	S	09-18-19 14:40	2 ft	637399-002
FS07	S	09-18-19 14:05	1 - 2 ft	637399-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 Tank Battery

Project ID: *012918068*
Work Order Number(s): *637399*

Report Date: *23-SEP-19*
Date Received: *09/19/2019*

Sample receipt non conformances and comments:

Per clients email, Corrected sample 001 name to SW14. NEW VERSION GENERATED JK 09/23/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102015 Chloride by EPA 300
Lab Sample ID 637399-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 637399-001, -002, -003.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3102054 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3102099 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637399-001.

Certificate of Analysis Summary 637399

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Tank Battery

Project Id: 012918068
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	637399-001		637399-002		637399-003					
	Field Id:	SW14		FS06		FS07					
	Depth:	0.5-2 ft		2- ft		1-2 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Sep-18-19 14:15		Sep-18-19 14:40		Sep-18-19 14:05					
BTEX by EPA 8021B	***Extracted:***	Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00					
	Analyzed:	Sep-19-19 16:38		Sep-19-19 17:58		Sep-19-19 18:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
Toluene		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
Ethylbenzene		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
m,p-Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
o-Xylene		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
Total Xylenes		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
Total BTEX		<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100				
Chloride by EPA 300	***Extracted:***	Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09					
	Analyzed:	Sep-19-19 21:44		Sep-19-19 22:03		Sep-19-19 22:12					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		25.3	9.88	95.2	9.86	31.6	9.88				
TPH by SW8015 Mod	***Extracted:***	Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09					
	Analyzed:	Sep-20-19 20:25		Sep-20-19 21:26		Sep-20-19 21:47					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Diesel Range Organics (DRO)		253	50.0	91.9	50.0	83.2	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Total GRO-DRO		253	50.0	91.9	50.0	83.2	50.0				
Total TPH		253	50.0	91.9	50.0	83.2	50.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-001	Date Collected:	09.18.19 14.15	Sample Depth:	0.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102015				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.3**	9.88	mg/kg	09.19.19 21.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 20.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**253**	50.0	mg/kg	09.20.19 20.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 20.25	U	1
Total GRO-DRO	PHC628	**253**	50.0	mg/kg	09.20.19 20.25		1
Total TPH	PHC635	**253**	50.0	mg/kg	09.20.19 20.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	09.20.19 20.25	
o-Terphenyl	84-15-1	157	%	70-135	09.20.19 20.25	**

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-001	Date Collected:	09.18.19 14.15	Sample Depth:	0.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.19.19 16.38	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.19.19 16.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.19.19 16.38	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.19.19 16.38	

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-002	Date Collected:	09.18.19 14.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102015				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**95.2**	9.86	mg/kg	09.19.19 22.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 21.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**91.9**	50.0	mg/kg	09.20.19 21.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 21.26	U	1
Total GRO-DRO	PHC628	**91.9**	50.0	mg/kg	09.20.19 21.26		1
Total TPH	PHC635	**91.9**	50.0	mg/kg	09.20.19 21.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	09.20.19 21.26	
o-Terphenyl	84-15-1	125	%	70-135	09.20.19 21.26	

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-002	Date Collected:	09.18.19 14.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.19.19 17.58	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.19.19 17.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.19.19 17.58	
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.19.19 17.58	

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-003	Date Collected:	09.18.19 14.05	Sample Depth:	1 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102015				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.6**	9.88	mg/kg	09.19.19 22.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.20.19 21.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.2**	50.0	mg/kg	09.20.19 21.47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 21.47	U	1
Total GRO-DRO	PHC628	**83.2**	50.0	mg/kg	09.20.19 21.47		1
Total TPH	PHC635	**83.2**	50.0	mg/kg	09.20.19 21.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	09.20.19 21.47	
o-Terphenyl	84-15-1	124	%	70-135	09.20.19 21.47	

Certificate of Analytical Results 637399

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637399-003	Date Collected:	09.18.19 14.05	Sample Depth:	1 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.19.19 18.18	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.19.19 18.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.19.19 18.18	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.19.19 18.18	

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 637399

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3102015 — Matrix: Solid — Date Prep: 09.19.19
MB Sample Id: 7686518-1-BLK — LCS Sample Id: 7686518-1-BKS — LCSD Sample Id: 7686518-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	254	102	90-110	2	20	mg/kg	09.19.19 21:30	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3102015 — Matrix: Soil — Date Prep: 09.19.19
Parent Sample Id: 637399-001 — MS Sample Id: 637399-001 S — MSD Sample Id: 637399-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.3	199	238	107	247	111	90-110	4	20	mg/kg	09.19.19 21:50	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102099 — Matrix: Solid — Date Prep: 09.20.19
MB Sample Id: 7686610-1-BLK — LCS Sample Id: 7686610-1-BKS — LCSD Sample Id: 7686610-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1010	101	956	96	70-135	5	35	mg/kg	09.20.19 19:45	
Diesel Range Organics (DRO)	<15.0	1000	1220	122	1110	111	70-135	9	35	mg/kg	09.20.19 19:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		95		127		70-135	%	09.20.19 19:45
o-Terphenyl	123		122		123		70-135	%	09.20.19 19:45

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102099 — Matrix: Soil — Date Prep: 09.20.19
Parent Sample Id: 637399-001 — MS Sample Id: 637399-001 S — MSD Sample Id: 637399-001 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)	<15.0	1000	918	92	949	95	70-135	3	35	mg/kg	09.20.19 20:46	
Diesel Range Organics (DRO)	253	1000	1210	96	1300	105	70-135	7	35	mg/kg	09.20.19 20:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	09.20.19 20:46
o-Terphenyl	115		89		70-135	%	09.20.19 20:46

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 637399

LT Environmental, Inc.

BEU 33 Tank Battery

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

Seq Number: 3102054 Matrix: Solid Date Prep: 09.19.19

MB Sample Id: 7686609-1-BLK LCS Sample Id: 7686609-1-BKS LCSD Sample Id: 7686609-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0918	92	0.0859	86	70-130	7	35	mg/kg	09.19.19 15:39	
Toluene	<0.000500	0.100	0.0894	89	0.0879	88	70-130	2	35	mg/kg	09.19.19 15:39	
Ethylbenzene	<0.00100	0.100	0.111	111	0.110	110	71-129	1	35	mg/kg	09.19.19 15:39	
m,p-Xylenes	<0.00100	0.200	0.228	114	0.223	112	70-135	2	35	mg/kg	09.19.19 15:39	
o-Xylene	<0.000500	0.100	0.112	112	0.110	110	71-133	2	35	mg/kg	09.19.19 15:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		113		91		70-130	%	09.19.19 15:39
4-Bromofluorobenzene	108		126		102		70-130	%	09.19.19 15:39

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

Seq Number: 3102054 Matrix: Soil Date Prep: 09.19.19

Parent Sample Id: 637399-001 MS Sample Id: 637399-001 S MSD Sample Id: 637399-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0808	82	0.0850	85	70-130	5	35	mg/kg	09.19.19 16:58	
Toluene	<0.000990	0.0990	0.0866	87	0.0902	90	70-130	4	35	mg/kg	09.19.19 16:58	
Ethylbenzene	<0.000990	0.0990	0.0888	90	0.0903	90	71-129	2	35	mg/kg	09.19.19 16:58	
m,p-Xylenes	<0.000990	0.198	0.179	90	0.181	91	70-135	1	35	mg/kg	09.19.19 16:58	
o-Xylene	<0.000495	0.0990	0.0877	89	0.0890	89	71-133	1	35	mg/kg	09.19.19 16:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	09.19.19 16:58
4-Bromofluorobenzene	96		97		70-130	%	09.19.19 16:58

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

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

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

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

Chain of Custody

Work Order No: 637399

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 Crasibad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A St	Address:	5104 E. Greene St
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	obyers@ltenv.com & dmoir@ltenv.com

Work Order Comments

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

Project Name:	BEU 33 Tank Battery	Turn Around	
Project Number:	012918068	Routine	☐
Project Location	Rural Eddy County	Rush:	24hr
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-1905	Quote #:	

SAMPLE RECEIPT

Temperature (°C):	2.3	Temp Blank:	Yes (No)
Received Intact:	(Yes) No	Wet Ice:	(Yes) No
Cooler Custody Seals:	Yes No (N/A)	Thermometer ID	T-NM-007
Sample Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
		Total Containers:	3

ANALYSIS REQUEST

Preservative Codes

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

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	SW15	S	9/18/19	1415	0.5-2'	1	X	X	X	composite
	FS06	S	↓	1440	2'	1	X	X	X	↓
	FS07	S	↓	1405	1-2'	1	X	X	X	

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	Anna Byers		9/19/19 1050	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/19/2019 10:50:00 AM

Work Order #: 637399

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/19/2019

Checklist reviewed by: Jessica Kramer Date: 09/20/2019

Jessica Kramer

Analytical Report 637407

for

LT Environmental, Inc.

Project Manager: Dan Moir

BEU 33 Tank Battery

012918068

23-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

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

23-SEP-19

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

Reference: XENCO Report No(s): **637407**
BEU 33 Tank Battery
Project Address: Rural Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637407. 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. 637407 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW10	S	09-17-19 11:40	0.5 - 2 ft	637407-001
SW11	S	09-17-19 12:45	0.5 - 9.5 ft	637407-002
SW12	S	09-17-19 13:55	0.5 - 11.5 ft	637407-003
SW03	S	09-17-19 14:15	0.5 - 2 ft	637407-004
SW13	S	09-17-19 14:35	0.5 - 11.5 ft	637407-005
FS03A	S	09-17-19 15:00	12.5 ft	637407-006
FS03B	S	09-17-19 15:15	13 ft	637407-007
FS04A	S	09-17-19 16:05	12.5 ft	637407-008
FS04B	S	09-17-19 16:40	16 ft	637407-009

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU 33 Tank Battery

Project ID: *012918068*
Work Order Number(s): *637407*

Report Date: *23-SEP-19*
Date Received: *09/19/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102054 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3102058 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3102099 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637407-006,637407-004.

Batch: LBA-3102100 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 637407-008.

Certificate of Analysis Summary 637407

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Tank Battery

Project Id: 012918068
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	637407-001		637407-002		637407-003		637407-004		637407-005		637407-006	
	Field Id:	SW10		SW11		SW12		SW03		SW13		FS03A	
	Depth:	0.5-2 ft		0.5-9.5 ft		0.5-11.5 ft		0.5-2 ft		0.5-11.5 ft		12.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-17-19 11:40		Sep-17-19 12:45		Sep-17-19 13:55		Sep-17-19 14:15		Sep-17-19 14:35		Sep-17-19 15:00	
BTEX by EPA 8021B	*Extracted:*	Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00		Sep-19-19 14:00	
	Analyzed:	Sep-19-19 22:34		Sep-19-19 22:54		Sep-19-19 23:14		Sep-19-19 23:34		Sep-19-19 23:54		Sep-20-19 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
Toluene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
Ethylbenzene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
m,p-Xylenes		<0.00202	0.00202	<0.00198	0.00198	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198
o-Xylene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
Total Xylenes		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
Total BTEX		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000990	0.000990
Chloride by EPA 300	*Extracted:*	Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09	
	Analyzed:	Sep-19-19 19:46		Sep-19-19 20:05		Sep-19-19 20:12		Sep-19-19 20:31		Sep-19-19 20:37		Sep-19-19 20:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.88	9.88	115	9.82	204	9.82	19.9	10.1	124	9.94	108	9.96
TPH by SW8015 Mod	*Extracted:*	Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09	
	Analyzed:	Sep-21-19 01:51		Sep-21-19 02:12		Sep-21-19 02:32		Sep-21-19 02:52		Sep-21-19 03:13		Sep-21-19 03:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0	<50.0	50.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 637407

LT Environmental, Inc., Arvada, CO

Project Name: BEU 33 Tank Battery

Project Id: 012918068
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Sep-19-19 10:50 am
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	637407-007		637407-008		637407-009					
	Field Id:	FS03B		FS04A		FS04B					
	Depth:	13- ft		12.5- ft		16- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Sep-17-19 15:15		Sep-17-19 16:05		Sep-17-19 16:40					
BTEX by EPA 8021B	***Extracted:***	Sep-19-19 14:00		Sep-19-19 17:30		Sep-19-19 17:30					
	Analyzed:	Sep-20-19 00:34		Sep-20-19 03:12		Sep-20-19 02:53					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
Toluene		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
Ethylbenzene		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
m,p-Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199				
o-Xylene		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
Total Xylenes		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
Total BTEX		<0.000996	0.000996	<0.00101	0.00101	<0.000996	0.000996				
Chloride by EPA 300	***Extracted:***	Sep-19-19 13:09		Sep-19-19 13:09		Sep-19-19 13:09					
	Analyzed:	Sep-19-19 20:50		Sep-19-19 20:57		Sep-19-19 21:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		111	9.94	455 D	19.9	1290	49.7				
TPH by SW8015 Mod	***Extracted:***	Sep-20-19 12:09		Sep-20-19 12:09		Sep-20-19 12:09					
	Analyzed:	Sep-21-19 03:53		Sep-21-19 05:35		Sep-21-19 06:36					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.0	50.0				
Total TPH		<50.0	50.0	<50.0	50.0	<50.0	50.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-001	Date Collected:	09.17.19 11.40	Sample Depth:	0.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	09.19.19 19.46	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 01.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 01.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 01.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 01.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 01.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	135	%	70-135	09.21.19 01.51	
o-Terphenyl	84-15-1	123	%	70-135	09.21.19 01.51	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-001	Date Collected:	09.17.19 11.40	Sample Depth:	0.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 22.34	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 22.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.19.19 22.34	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.19.19 22.34	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-002	Date Collected:	09.17.19 12.45	Sample Depth:	0.5 - 9.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	9.82	mg/kg	09.19.19 20.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 02.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 02.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 02.12	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 02.12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 02.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.21.19 02.12	
o-Terphenyl	84-15-1	134	%	70-135	09.21.19 02.12	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-002	Date Collected:	09.17.19 12.45	Sample Depth:	0.5 - 9.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.19.19 22.54	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1
Total BTEX		<0.000990	0.000990	mg/kg	09.19.19 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	09.19.19 22.54	
1,4-Difluorobenzene	540-36-3	108	%	70-130	09.19.19 22.54	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-003	Date Collected:	09.17.19 13.55	Sample Depth:	0.5 - 11.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**204**	9.82	mg/kg	09.19.19 20.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 02.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 02.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 02.32	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 02.32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 02.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.21.19 02.32	
o-Terphenyl	84-15-1	122	%	70-135	09.21.19 02.32	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-003	Date Collected:	09.17.19 13.55	Sample Depth:	0.5 - 11.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.19.19 23.14	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1
Total BTEX		<0.000990	0.000990	mg/kg	09.19.19 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	09.19.19 23.14	
1,4-Difluorobenzene	540-36-3	84	%	70-130	09.19.19 23.14	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-004	Date Collected:	09.17.19 14.15	Sample Depth:	0.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.9**	10.1	mg/kg	09.19.19 20.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 02.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 02.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 02.52	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 02.52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 02.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	139	%	70-135	09.21.19 02.52	**
o-Terphenyl	84-15-1	122	%	70-135	09.21.19 02.52	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-004	Date Collected:	09.17.19 14.15	Sample Depth:	0.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.19.19 23.34	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.19.19 23.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	09.19.19 23.34	
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.19.19 23.34	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-005	Date Collected:	09.17.19 14.35	Sample Depth:	0.5 - 11.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**124**	9.94	mg/kg	09.19.19 20.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 03.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 03.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 03.13	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 03.13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 03.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	09.21.19 03.13	
o-Terphenyl	84-15-1	124	%	70-135	09.21.19 03.13	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-005	Date Collected:	09.17.19 14.35	Sample Depth:	0.5 - 11.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.19.19 23.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.19.19 23.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	09.19.19 23.54	
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.19.19 23.54	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS03A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-006	Date Collected:	09.17.19 15.00	Sample Depth:	12.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	9.96	mg/kg	09.19.19 20.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 03.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 03.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 03.33	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 03.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	140	%	70-135	09.21.19 03.33	**
o-Terphenyl	84-15-1	134	%	70-135	09.21.19 03.33	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS03A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-006	Date Collected:	09.17.19 15.00	Sample Depth:	12.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.20.19 00.13	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1
Total BTEX		<0.000990	0.000990	mg/kg	09.20.19 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	09.20.19 00.13	
1,4-Difluorobenzene	540-36-3	111	%	70-130	09.20.19 00.13	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS03B**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-007	Date Collected:	09.17.19 15.15	Sample Depth:	13 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**111**	9.94	mg/kg	09.19.19 20.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102099				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 03.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 03.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 03.53	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 03.53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 03.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	09.21.19 03.53	
o-Terphenyl	84-15-1	121	%	70-135	09.21.19 03.53	

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LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS03B**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-007	Date Collected:	09.17.19 15.15	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 14.00	Basis:	Wet Weight
Seq Number:	3102054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.20.19 00.34	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.20.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	09.20.19 00.34	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.20.19 00.34	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-008	Date Collected:	09.17.19 16.05	Sample Depth:	12.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**455**	19.9	mg/kg	09.20.19 11.09	D	2

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102100				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 05.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 05.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 05.35	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 05.35	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 05.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	145	%	70-135	09.21.19 05.35	**
o-Terphenyl	84-15-1	120	%	70-135	09.21.19 05.35	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-008	Date Collected:	09.17.19 16.05	Sample Depth:	12.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 17.30	Basis:	Wet Weight
Seq Number:	3102058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.20.19 03.12	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.20.19 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	09.20.19 03.12	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.20.19 03.12	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS04B**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-009	Date Collected:	09.17.19 16.40	Sample Depth:	16 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.19.19 13.09	Basis:	Wet Weight
Seq Number:	3102013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1290**	49.7	mg/kg	09.19.19 21.03		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.20.19 12.09	Basis:	Wet Weight
Seq Number:	3102100				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.21.19 06.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.21.19 06.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.21.19 06.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.21.19 06.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.21.19 06.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	09.21.19 06.36	
o-Terphenyl	84-15-1	101	%	70-135	09.21.19 06.36	

Certificate of Analytical Results 637407

LT Environmental, Inc., Arvada, CO

BEU 33 Tank Battery

Sample Id:	**FS04B**	Matrix:	Soil	Date Received:	09.19.19 10.50
Lab Sample Id:	637407-009	Date Collected:	09.17.19 16.40	Sample Depth:	16 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	CAC			% Moisture:	
Analyst:	DTH	Date Prep:	09.19.19 17.30	Basis:	Wet Weight
Seq Number:	3102058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.20.19 02.53	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.20.19 02.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.20.19 02.53	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.20.19 02.53	

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 637407

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Solid Date Prep: 09.19.19
MB Sample Id: 7686516-1-BLK LCS Sample Id: 7686516-1-BKS LCSD Sample Id: 7686516-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	257	103	90-110	0	20	mg/kg	09.19.19 16:43	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Soil Date Prep: 09.19.19
Parent Sample Id: 637404-001 MS Sample Id: 637404-001 S MSD Sample Id: 637404-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.83	199	211	103	219	107	90-110	4	20	mg/kg	09.19.19 17:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3102013 Matrix: Solid Date Prep: 09.19.19
Parent Sample Id: 637407-001 MS Sample Id: 637407-001 S MSD Sample Id: 637407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.89	199	219	106	207	100	90-110	6	20	mg/kg	09.19.19 19:52	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3102099 Matrix: Solid Date Prep: 09.20.19
MB Sample Id: 7686610-1-BLK LCS Sample Id: 7686610-1-BKS LCSD Sample Id: 7686610-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1010	101	956	96	70-135	5	35	mg/kg	09.20.19 19:45	
Diesel Range Organics (DRO)	<50.0	1000	1220	122	1110	111	70-135	9	35	mg/kg	09.20.19 19:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		95		127		70-135	%	09.20.19 19:45
o-Terphenyl	123		122		123		70-135	%	09.20.19 19:45

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

QC Summary 637407

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102100 — Matrix: Solid — Date Prep: 09.20.19
MB Sample Id: 7686615-1-BLK — LCS Sample Id: 7686615-1-BKS — LCSD Sample Id: 7686615-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	950	95	936	94	70-135	1	35	mg/kg	09.21.19 04:54	
Diesel Range Organics (DRO)	<15.0	1000	1060	106	1010	101	70-135	5	35	mg/kg	09.21.19 04:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		126		123		70-135	%	09.21.19 04:54
o-Terphenyl	116		134		132		70-135	%	09.21.19 04:54

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102099 — Matrix: Soil — Date Prep: 09.20.19
Parent Sample Id: 637399-001 — MS Sample Id: 637399-001 S — MSD Sample Id: 637399-001 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)	<15.0	1000	918	92	949	95	70-135	3	35	mg/kg	09.20.19 20:46	
Diesel Range Organics (DRO)	253	1000	1210	96	1300	105	70-135	7	35	mg/kg	09.20.19 20:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		127		70-135	%	09.20.19 20:46
o-Terphenyl	115		89		70-135	%	09.20.19 20:46

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102100 — Matrix: Soil — Date Prep: 09.20.19
Parent Sample Id: 637407-008 — MS Sample Id: 637407-008 S — MSD Sample Id: 637407-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	882	88	913	91	70-135	3	35	mg/kg	09.21.19 05:55	
Diesel Range Organics (DRO)	<15.0	1000	964	96	1010	101	70-135	5	35	mg/kg	09.21.19 05:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		129		70-135	%	09.21.19 05:55
o-Terphenyl	131		121		70-135	%	09.21.19 05:55

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 637407

LT Environmental, Inc.

BEU 33 Tank Battery

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102054 | Matrix: Solid | Date Prep: 09.19.19
MB Sample Id: 7686609-1-BLK | LCS Sample Id: 7686609-1-BKS | LCSD Sample Id: 7686609-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0918	92	0.0859	86	70-130	7	35	mg/kg	09.19.19 15:39	
Toluene	<0.000500	0.100	0.0894	89	0.0879	88	70-130	2	35	mg/kg	09.19.19 15:39	
Ethylbenzene	<0.00100	0.100	0.111	111	0.110	110	71-129	1	35	mg/kg	09.19.19 15:39	
m,p-Xylenes	<0.00100	0.200	0.228	114	0.223	112	70-135	2	35	mg/kg	09.19.19 15:39	
o-Xylene	<0.000500	0.100	0.112	112	0.110	110	71-133	2	35	mg/kg	09.19.19 15:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		113		91		70-130	%	09.19.19 15:39
4-Bromofluorobenzene	108		126		102		70-130	%	09.19.19 15:39

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102058 | Matrix: Solid | Date Prep: 09.19.19
MB Sample Id: 7686626-1-BLK | LCS Sample Id: 7686626-1-BKS | LCSD Sample Id: 7686626-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0915	92	0.0844	84	70-130	8	35	mg/kg	09.20.19 01:53	
Toluene	<0.00100	0.100	0.0982	98	0.0872	87	70-130	12	35	mg/kg	09.20.19 01:53	
Ethylbenzene	<0.00100	0.100	0.118	118	0.107	107	71-129	10	35	mg/kg	09.20.19 01:53	
m,p-Xylenes	<0.00200	0.200	0.236	118	0.214	107	70-135	10	35	mg/kg	09.20.19 01:53	
o-Xylene	<0.00100	0.100	0.116	116	0.107	107	71-133	8	35	mg/kg	09.20.19 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		100		89		70-130	%	09.20.19 01:53
4-Bromofluorobenzene	97		111		101		70-130	%	09.20.19 01:53

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102054 | Matrix: Soil | Date Prep: 09.19.19
Parent Sample Id: 637399-001 | MS Sample Id: 637399-001 S | MSD Sample Id: 637399-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0808	82	0.0850	85	70-130	5	35	mg/kg	09.19.19 16:58	
Toluene	<0.000990	0.0990	0.0866	87	0.0902	90	70-130	4	35	mg/kg	09.19.19 16:58	
Ethylbenzene	<0.000990	0.0990	0.0888	90	0.0903	90	71-129	2	35	mg/kg	09.19.19 16:58	
m,p-Xylenes	<0.000990	0.198	0.179	90	0.181	91	70-135	1	35	mg/kg	09.19.19 16:58	
o-Xylene	<0.000495	0.0990	0.0877	89	0.0890	89	71-133	1	35	mg/kg	09.19.19 16:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	09.19.19 16:58
4-Bromofluorobenzene	96		97		70-130	%	09.19.19 16:58

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 637407

LT Environmental, Inc.

BEU 33 Tank Battery

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

Seq Number: 3102058 Matrix: Soil Date Prep: 09.19.19

Parent Sample Id: 637407-008 MS Sample Id: 637407-008 S MSD Sample Id: 637407-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0878	88	0.0790	79	70-130	11	35	mg/kg	09.20.19 03:32	
Toluene	<0.00100	0.100	0.0894	89	0.0788	79	70-130	13	35	mg/kg	09.20.19 03:32	
Ethylbenzene	<0.00100	0.100	0.0956	96	0.0960	96	71-129	0	35	mg/kg	09.20.19 03:32	
m,p-Xylenes	<0.00201	0.201	0.193	96	0.193	97	70-135	0	35	mg/kg	09.20.19 03:32	
o-Xylene	<0.00100	0.100	0.0961	96	0.0962	96	71-133	0	35	mg/kg	09.20.19 03:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		111		70-130	%	09.20.19 03:32
4-Bromofluorobenzene	126		125		70-130	%	09.20.19 03:32

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 637407

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	BEU 53 Tank Battery	Turn Around	
Project Number:	012918068	Routine	☐
Project Location	Rural Eddy County	Rush:	24 hr
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-1905	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.2	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	9

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	SW10	S	9/17/19	1140	0.5-2'	1				composite
	SW11	S		1245	0.5-9.5'	1				↓
	SW12	S		1355	0.5-11.5'	1				↓
	SW13	S		1415	0.5-2'	1				↓
	SW14	S		1435	0.5-11.5'	1				↓
	FS03A	S		1500	12.5'	1				discrete
	FS03B	S		1515	13'	1				↓
	FS04A	S		1605	12.5'	1				↓
	FS04B	S		1640	16'	1				↓
		S	↓	↓	↓	↓			CB	↓

ANALYSIS REQUEST

Preservative Codes

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

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

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

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

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

1631 / 245.1 / 7470 / 7471 : Hg

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		9/19/19 10:50	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

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Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 195809

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 195809
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	3/10/2023