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

February 28, 2019

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

RE: Closure Request
Poker Lake Unit #420 Battery
Remediation Permit Number 2RP-5102
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing delineation soil sampling and excavation activities at the Poker Lake Unit #420 Battery (Site) in Unit P, Section 28, Township 25 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impact to soil after a heater-treater gasket failed, causing crude oil and produced water to release onto the surface of the pad in the process equipment area. The release was discovered on November 19, 2018. Approximately 19.5 barrels (bbls) of crude oil and 2.2 bbls of produced water were released. The gasket was repaired, and vacuum trucks were dispatched to the Site to recover the free-standing fluid. Approximately 18 bbls of crude oil and 2 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on December 4, 2018, and was assigned Remediation Permit (RP) Number 2RP-5102 (Attachment 1).

BACKGROUND

The release occurred after August 14, 2018; therefore, LTE applied Table 1, the *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to groundwater data is United States Geological Survey well 320643103465002 25S.31E.21.413314A, located approximately 1.17 miles north of the Site, with a depth to groundwater of 318 feet bgs and a total depth of 400 feet bgs. The elevation of the water well is approximately 26 feet higher than the Site. The closest surface water to the Site is an unnamed dry wash located approximately 0.99 miles southwest 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. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

PRELIMINARY SOIL SAMPLING

On November 27, 2018, LTE personnel inspected the Site to evaluate the release extent. Surface hydrocarbon staining was observed in the release area. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected six preliminary soil samples (SS01 through SS06) within the release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the sample location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories, Inc. (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0.

Laboratory analytical results for soil samples SS01, SS02, and SS04 indicated that BTEX, GRO/DRO, and TPH concentrations exceeded the NMOCD Table 1 closure criteria; soil sample SS03 exceeded the NMOCD Table 1 closure criteria for GRO/DRO; and soil sample SS05 exceeded the NMOCD Table 1 closure criteria for BTEX, GRO/DRO, TPH, and chloride. Laboratory analytical results for soil sample SS06 indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2. Based on the soil sample analytical results, excavation of impacted soil was required.

DELINEATION ACTIVITIES

During January and February 2019, LTE personnel returned to the Site to oversee potholing and excavation activities. Potholes PH01 through PH12 were advanced in the release area using a hydrovacuum and track hoe to further delineate the lateral and vertical extent of impacted soil and help guide excavation activities. Soil was field screened in each pothole using a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected from each pothole PH01 through PH10. Soil samples were collected from depths ranging from 1 foot to 10 feet bgs in potholes PH01 through PH05. Soil samples were collected from the surface and from 1 foot bgs in potholes PH06 through PH10. One soil sample was collected from each pothole PH11 and PH12 from a depth of 4 feet and 4.5 feet bgs, respectively.

On February 19, 2019, LTE personnel returned to the Site to confirm the vertical and horizontal extent of impacted soil north of the pad. Three boreholes (BH13 through BH15) were advanced to a depth of 3 feet to 3.5 feet bgs using a hand auger. Soil was field screened in each borehole using a PID and Hach® chloride QuanTab® test strips. Two soil samples were collected from each borehole from a depth of 0.3 feet and a depth 3 feet or 3.5 feet bgs.

The pothole and borehole soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations and depths are presented on Figure 3 and soil sample logs are included as Attachment 3.

Laboratory analytical results for pothole soil samples PH02, PH04, PH05, and PH07 indicated that TPH and/or GRO/DRO concentrations exceeded the NMOCD Table 1 closure criteria. Laboratory analytical results for all other pothole and borehole soil samples indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results are summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

EXCAVATION ACTIVITIES

During January and February 2019, LTE personnel was on site to oversee excavation activities as indicated by potholing and field screening activities, laboratory analytical results, and the documented release area. To direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Due to the presence of active process equipment and pipelines in the release area, four separate excavations were completed. Excavation depths ranged from 2.5 feet to 4.5 feet bgs. Following removal of impacted soil to the extent possible, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of each excavation. The 5-point composite soil samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

The northern excavation measured approximately 1,721 square feet in area with a depth of 2.5 feet bgs. Composite soil samples SW08 and SW09 were collected from the sidewalls of the excavation from the surface to a depth to 3 feet bgs. Composite soil samples FS10 through FS13 were collected from the floor of the excavation from a depth of 2.5 feet bgs.

The central excavation measured approximately 1,069 square feet in area with a depth of 2.5 feet bgs. Composite soil samples SW05 and SW06 were collected from the sidewalls of the excavation from the surface to a depth of 2.5 feet bgs. Composite soil samples FS05 through FS09 were collected from the floor of the excavation from a depth of 2.5 feet bgs.

The southern excavation measured approximately 1,871 square feet in area with a depth of 4 feet to 4.5 feet bgs. Composite soil samples SW01 through SW04, and SW07 were collected from the sidewalls of the excavation from the surface to a depth of 4 feet bgs. Composite soil

samples FS01 through FS04, and FS04A were collected from the floor of the excavation from depths of 4 feet to 4.5 feet bgs.

The smallest excavation in the northeastern corner of the pad measured approximately 263 square feet in area with a depth of 2.5 feet bgs. Composite soil samples SW10 and SW11 were collected from the sidewalls of the excavation from the surface to a depth of 2.5 feet bgs. Composite soil samples FS14 and FS15 were collected from the floor of the excavation from depths of 1 foot to 2.5 feet bgs.

All excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. Approximately 500 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at R360 Red Bluff Landfill Facility in Orla, Texas. The soil sample locations and depths are presented on Figure 4.

ANALYTICAL RESULTS

Laboratory analytical results exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS05 and in potholes soil samples PH02, PH04, PH05, and PH07. The impacted soil was excavated to the extent possible and laboratory analytical results for excavation floor samples FS01 through FS03, FS04A, and FS05 through FS13 and excavation sidewall samples SW01 through SW03, SW05, SW07, and SW08 collected from the final excavation extents indicated that BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Floor sample FS04 initially exceeded the NMOCD Table 1 closure criteria for GRO/DRO; additional soil was removed from the floor of the excavation and subsequent confirmation floor sample FS04A was compliant with the NMOCD Table 1 closure criteria. Sidewall sample SW04 initially exceeded the NMOCD Table 1 closure criteria for GRO/DRO; additional soil was removed from the sidewall of the excavation and subsequent confirmation sidewall sample SW07 was compliant with the NMOCD Table 1 closure criteria.

Laboratory analytical results for excavation floor samples FS14 and FS15 and excavation sidewall samples SW06 and SW09 through SW11 indicated that TPH and/or GRO/DRO exceeded the NMOCD Table 1 closure criteria. Further excavation of impacted soil was limited by active process equipment and pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site process equipment and pipelines. This XTO safety policy is established to protect workers and to reduce the likelihood of compromising the foundation of the process equipment. This policy was enforced where impacted soil was identified within two feet of active process equipment and/or pipelines in soil samples FS14, FS15, SW06, and SW09 through SW11. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 2.

CONCLUSIONS

A total of approximately 410 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth-moving activities within 2-feet of active process equipment and pipelines. Laboratory analytical results for excavation sample SW09 collected from the sidewall of the northern excavation, excavation soil samples SW10, SW11, FS14, and FS15 collected from the northeast excavation, and excavation soil sample SW06 collected from the north wall of the central excavation, indicated that soil with TPH and/or DRO/GRO concentrations exceeding the NMOCD Table 1 closure criteria was left in place within two feet of active process equipment and pipelines. An estimated 400 cubic yards of impacted soil remain in place in the northeast corner of the pad, assuming a maximum 4-foot depth based on borehole samples BH13A through BH15A collected from 3 feet bgs that were compliant with the NMOCD Table 1 closure criteria. An estimated 300 cubic yards of impacted soil remain in place in the central excavation, assuming a maximum 3-foot depth based on floor samples FS07, FS08, FS10 and FS11 collected from 2.5 feet bgs that were compliant with the NMOCD Table 1 closure criteria.

XTO requests to backfill the existing excavations and complete remediation during any future major well pad construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The majority of this release occurred within the process equipment berm and free-standing fluids were recovered during initial response activities. No saturated soil remains in place. The impacted soil remaining in place in the northeast corner is delineated vertically and laterally by samples collected from boreholes BH13 through BH15. The impacted soil remaining in place in the central excavation is delineated vertically and laterally by floor samples FS07, FS08, FS10 and FS11.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for this release. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions. An updated NMOCD Form C-141 is included in Attachment 1. A photographic log of the Site is included in Attachment 4.

If you have any questions or comments, please do not hesitate to contact Ms. Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, BLM
Deborah McKinney, BLM

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-5102)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sample Logs
Attachment 4	Photographic Log

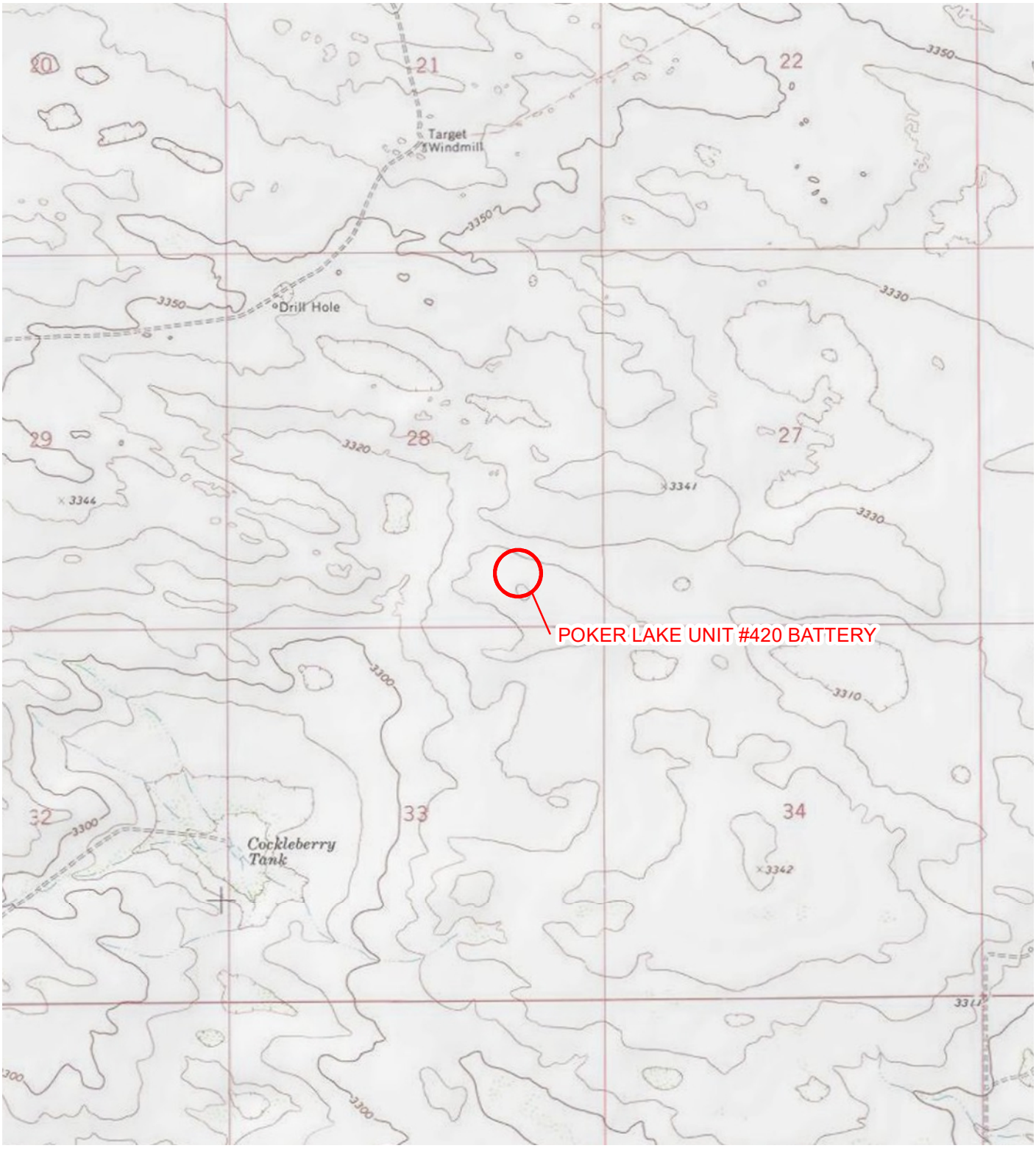

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-5102

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT #420 BATTERY
UNIT P SEC 28 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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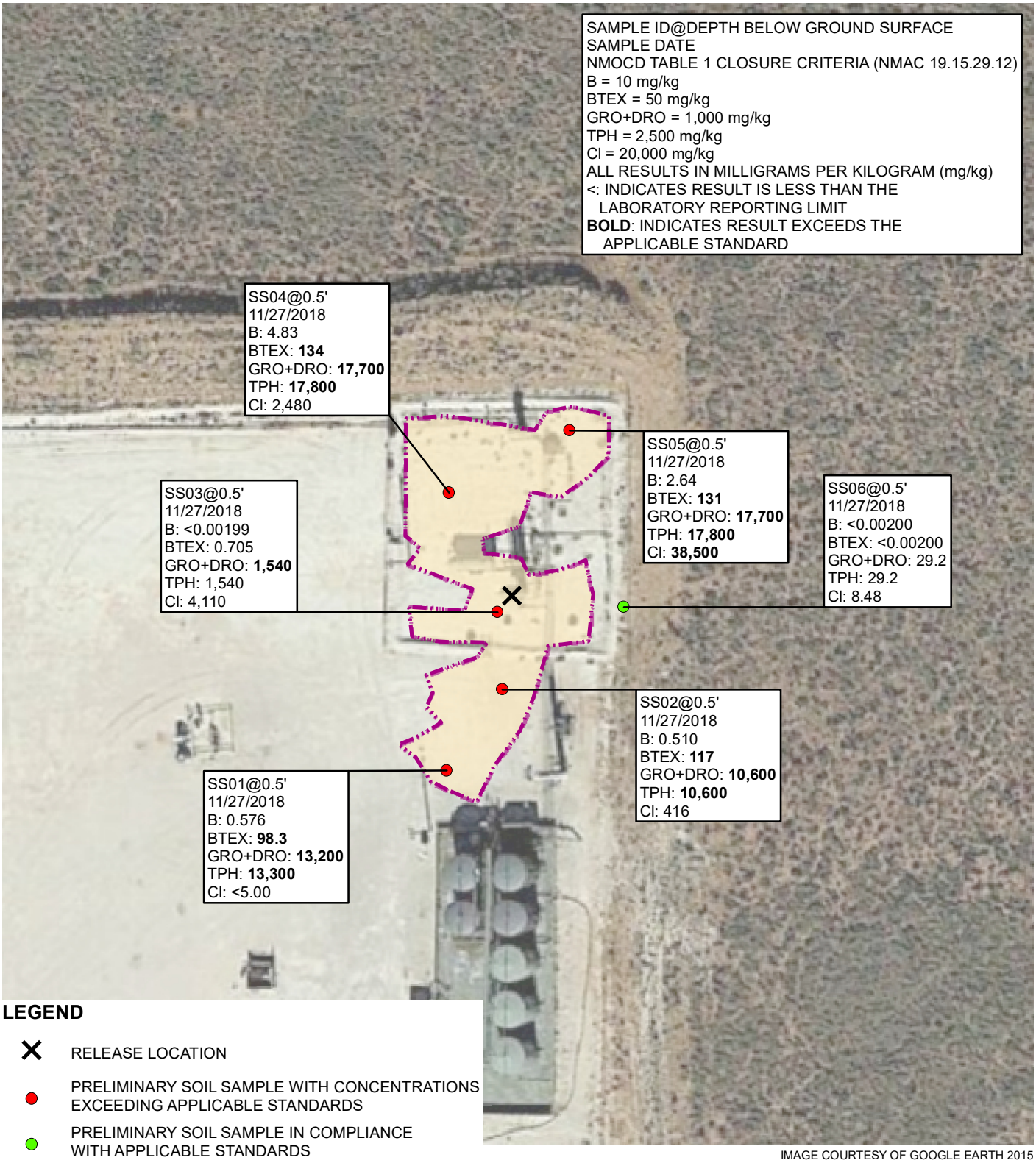

IMAGE COURTESY OF GOOGLE EARTH 2015

LEGEND

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

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5102

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #420 BATTERY
UNIT P SEC 28 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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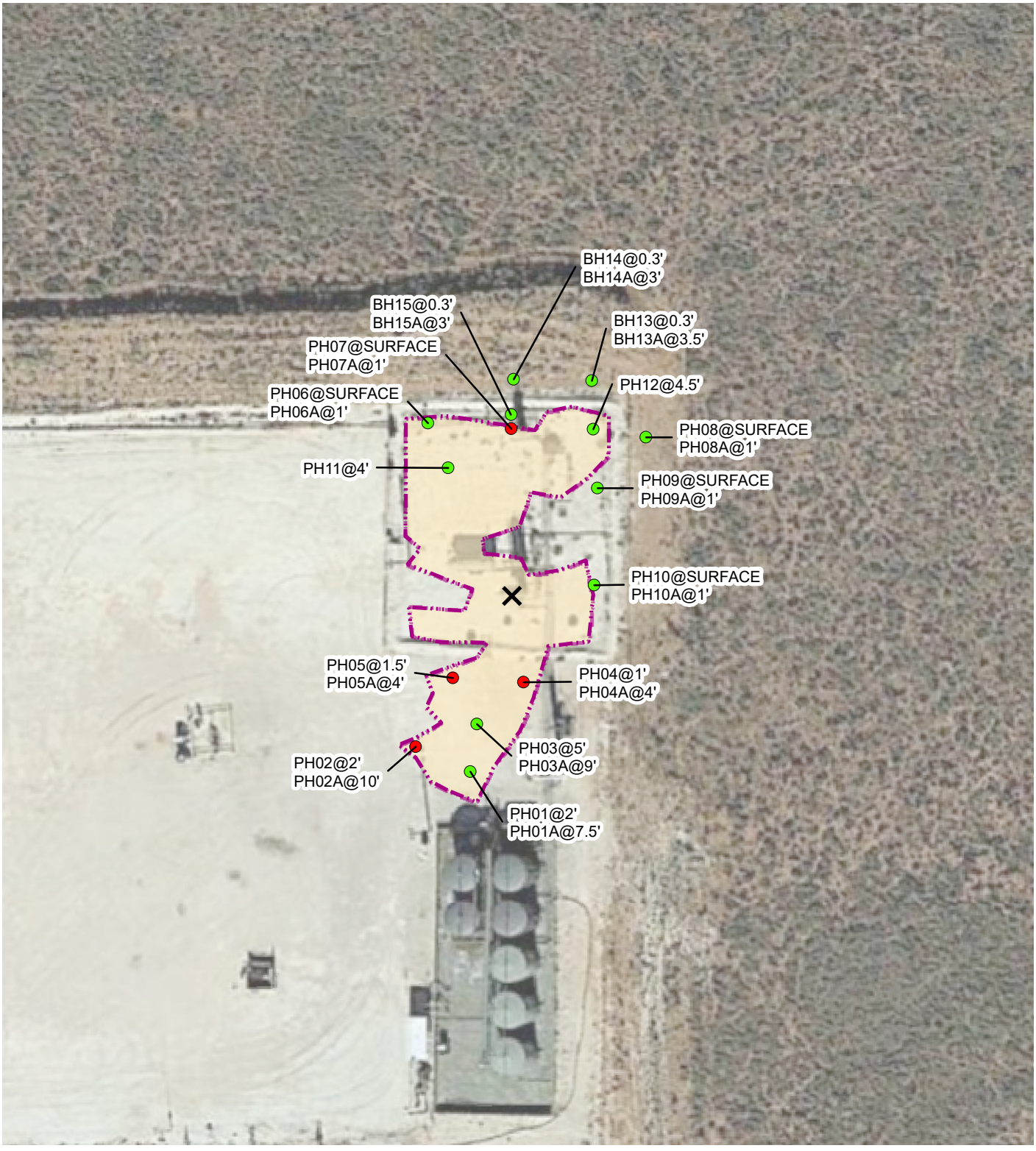

IMAGE COURTESY OF GOOGLE EARTH 2015

LEGEND

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

NOTE: REMEDIATION PERMIT NUMBER 2RP-5102

0 60 120
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #420 BATTERY
UNIT P SEC 28 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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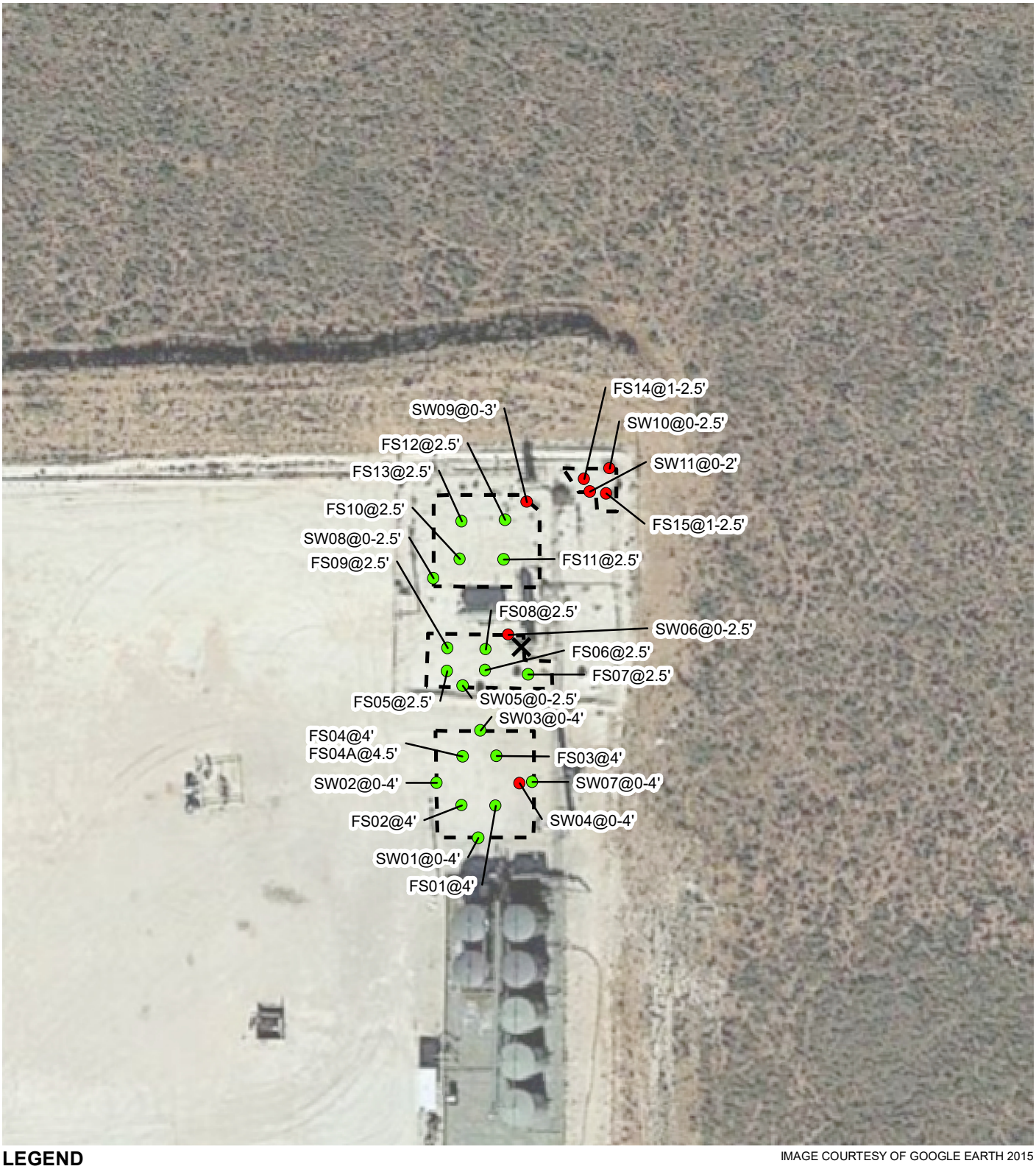

LEGEND

IMAGE COURTESY OF GOOGLE EARTH 2015

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

0 60 120
Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-5102

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT #420 BATTERY
UNIT P SEC 28 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918193_PLU 420 BATTERY\012918193_FIG04_EXCAVATION SS_2018_5102_ND.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #420 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5102
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	11/27/2018	0.576	23.6	11.9	62.2	**98.3**	4,760	8,410	90.0	**13,200**	**13,300**	<5.00
SS02	0.5	11/27/2018	0.510	24.4	14.7	76.9	**117**	3,320	7,240	82.8	**10,600**	**10,600**	416
SS03	0.5	11/27/2018	<0.00199	0.0836	0.116	0.505	0.705	274	1,270	<15.0	**1,540**	1,540	4,110
SS04	0.5	11/27/2018	4.83	41.4	16.2	71.1	**134**	7,040	10,700	109	**17,700**	**17,800**	2,480
SS05	0.5	11/27/2018	2.64	33.8	15.1	79.2	**131**	5,510	12,200	131	**17,700**	**17,800**	**38,500**
SS06	0.5	11/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	29.2	<15.0	29.2	29.2	8.48
PH01	2	01/25/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	18.6	<15.0	18.6	18.6	32.2
PH01A	7.5	01/25/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
PH02	2	01/25/2019	0.00474	0.0998	0.0193	0.144	0.268	154	993	149	**1,150**	1,300	<4.96
PH02A	10	01/25/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	8.52
PH03	5	01/25/2019	<0.00200	<0.00200	<0.00200	0.00205	0.00205	<15.0	219	36.8	219	256	15.7
PH03A	9	01/25/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	24.8	<15.0	24.8	24.8	29.8
PH04	1	01/25/2019	<0.00199	0.0431	0.0126	0.0890	0.145	247	1,960	300	**2,210**	**2,510**	1,460
PH04A	4	01/25/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	50.3
PH05	1.5	01/25/2019	0.00344	0.0994	0.0230	0.155	0.281	234	1,260	202	**1,490**	1,700	147
PH05A	4	01/25/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
FS01	4	01/30/2019	<0.00200	0.00246	<0.00200	<0.00200	0.00246	<15.0	<15.0	<15.0	<15.0	<15.0	254
FS02	4	01/30/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	<5.00
FS03	4	01/30/2019	<0.00200	0.0286	0.0311	0.189	0.249	58.0	559	103	617	720	325
FS04	4	01/30/2019	0.00529	0.112	0.0443	0.262	0.424	162	883	165	**1,050**	1,210	79.8
SW01	0 - 4	01/30/2019	<0.00200	0.0512	0.0520	0.328	0.431	76.3	583	103	659	762	770
SW02	0 - 4	01/30/2019	<0.00201	0.00675	0.0133	0.108	0.128	16.2	177	30.8	193	224	14.9
SW03	0 - 4	01/30/2019	<0.00200	0.0134	0.0404	0.242	0.296	26.3	388	63.8	414	478	243
SW04	0 - 4	01/30/2019	<0.00200	0.0308	0.0450	0.329	0.405	104	908	174	**1,010**	1,190	218
FS05	2.5	01/31/2019	<0.00201	<0.00201	0.0145	0.0485	0.0630	17.9	265	44.8	283	328	39.2
FS06	2.5	01/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	293
FS07	2.5	01/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	31.2	<15.0	31.2	31.2	1,030

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #420 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5102
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS08	2.5	01/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	18.8	<15.0	18.8	18.8	664
FS09	2.5	01/31/2019	<0.00200	<0.00200	0.00945	0.0479	0.0574	15.6	157	22.8	173	195	1,520
SW05	0 - 2.5	01/31/2019	<0.00201	0.00595	0.0439	0.202	0.252	52.5	476	88.7	529	617	1,930
SW06	0 - 2.5	01/31/2019	0.0204	0.316	0.0859	0.640	1.06	392	1,160	184	**1,550**	1,740	5,700
FS04A	4.5	02/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	62.9	<15.0	62.9	62.9	10.9
FS10	2.5	02/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	15.4	<15.0	15.4	15.4	362
FS11	2.5	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	17.0	<14.9	17.0	17.0	1,390
FS12	2.5	02/05/2019	<0.00200	<0.00200	<0.00200	0.00805	0.00805	<15.0	52.4	<15.0	52.4	52.4	4,640
FS13	2.5	02/05/2019	0.108	0.475	5.67	1.36	7.62	31.4	171	18.7	202	221	35.2
PH06	Surface	02/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	39.8	15.9	39.8	55.7	<5.00
PH06A	1	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH07	Surface	02/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	1,070	417	**1,070**	1,490	138
PH07A	1	02/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	243	105	243	348	188
PH08	Surface	02/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	6.72
PH08A	1	02/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH09	Surface	02/05/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	41.1	<15.0	41.1	41.1	206
PH09A	1	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,100
PH10	Surface	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	79.9	16.6	79.9	96.5	179
PH10A	1	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	101	20.0	101	121	155
PH11	4	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	118
PH12	4.5	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	877
SW07	0 - 4	02/05/2019	<0.00200	<0.00200	<0.00200	0.00428	0.00428	<15.0	197	39.6	197	237	771
SW08	0 - 2.5	02/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	60.2	<15.0	60.2	60.2	818
SW09	0 - 3	02/05/2019	0.0653	0.656	0.615	3.91	5.25	822	3,480	449	**4,300**	**4,750**	5,650
FS14	1 - 2.5	02/06/2019	0.243	5.70	3.68	20.0	29.6	1,420	4,280	487	**5,700**	**6,190**	15,600
FS15	1 - 2.5	02/06/2019	0.140	1.89	5.11	7.68	14.8	403	1,550	214	**1,950**	2,170	9,730
SW10	0 - 2.5	02/06/2019	0.152	5.92	5.28	28.7	40.1	2,350	8,190	1,100	**10,500**	**11,600**	5,120

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT #420 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5102
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SW11	0 - 2	02/06/2019	0.467	14.8	10.3	52.7	**78.3**	2,170	6,970	994	**9,140**	**10,100**	5,140
BH13	0.3	02/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
BH13A	3.5	02/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
BH14	0.3	02/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH14A	3	02/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH15	0.3	02/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	19.2	<15.0	19.2	19.2	10.8
BH15A	3	02/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	25.9
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
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NMAC - New Mexico Administrative Code

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5102)

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	NAB1834656162
District RP	2 2RP-5102
Facility ID	
Application ID	pAB1834654349

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1834656162
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.096080° Longitude -103.778375°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit #420 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 11/19/2018	API# *(if applicable)* 30-015-39795

Unit Letter	Section	Township	Range	County
P	28	25S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 19.5	Volume Recovered (bbls) 18
☒ Produced Water	Volume Released (bbls) 2.2	Volume Recovered (bbls) 2
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Fluids were released to the well pad from the heater treater when a gasket failed. A vacuum truck recovered free standing fluids and the gasket was repaired. An environmental contractor has been retained to assist with remediation efforts.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1834656162
District RP	2 2RP-5102
Facility ID	
Application ID	pAB1834654349

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: [signature] Date: 12-4-18

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

OCD Only

Received by: [signature] Date: 12/12/18

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2 2RP-5102
Facility ID	
Application ID	pAB1834654349

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.***

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2 2RP-5102
Facility ID	
Application ID	pAB1834654349

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 12-4-18

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

OCD Only

Received by: Date: 12/12/2018

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5102
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 2-28-19

email: kyle_littrell@xtoenenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5102
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 2-28-19

email: kyle_littrell@xtoenenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

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

Signature: Date:

Analytical Report 606837

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420

06-DEC-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

06-DEC-18

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

Reference: XENCO Report No(s): **606837**
PLU 420
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) 606837. 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. 606837 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	11-27-18 16:00	0.5 ft	606837-001
SS02	S	11-27-18 16:05	0.5 ft	606837-002
SS03	S	11-27-18 16:15	0.5 ft	606837-003
SS04	S	11-27-18 16:20	0.5 ft	606837-004
SS05	S	11-27-18 16:30	0.5 ft	606837-005
SS06	S	11-27-18 16:40	0.5 ft	606837-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3071195 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 606837-001,606837-005,606837-004,606837-002.

Batch: LBA-3071866 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 606837-005,606837-002.

Batch: LBA-3071910 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 606837-003.

Certificate of Analysis Summary 606837

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420

Project Id:
Contact: Adrian Baker
Project Location:

Date Received in Lab: Thu Nov-29-18 11:37 am
Report Date: 06-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	606837-001		606837-002		606837-003		606837-004		606837-005		606837-006	
	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-27-18 16:00		Nov-27-18 16:05		Nov-27-18 16:15		Nov-27-18 16:20		Nov-27-18 16:30		Nov-27-18 16:40	
BTEX by EPA 8021B	***Extracted:***	Dec-06-18 09:00		Dec-06-18 09:00		Dec-05-18 16:00		Dec-06-18 09:00		Dec-06-18 09:00		Dec-06-18 09:00	
	Analyzed:	Dec-06-18 13:48		Dec-06-18 13:25		Dec-06-18 14:51		Dec-06-18 16:16		Dec-06-18 14:09		Dec-06-18 12:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.576	0.503	0.510	0.398	<0.00199	0.00199	4.83	2.00	2.64	0.501	<0.00200	0.00200
Toluene		23.6	0.503	24.4	0.398	0.0836	0.00199	41.4	2.00	33.8	0.501	<0.00200	0.00200
Ethylbenzene		11.9	0.503	14.7	0.398	0.116	0.00199	16.2	2.00	15.1	0.501	<0.00200	0.00200
m,p-Xylenes		46.1	1.01	55.8	0.797	0.342	0.00398	53.8	4.00	58.0	1.00	<0.00399	0.00399
o-Xylene		16.1	0.503	21.1	0.398	0.163	0.00199	17.3	2.00	21.2	0.501	<0.00200	0.00200
Total Xylenes		62.2	0.503	76.9	0.398	0.505	0.00199	71.1	2.00	79.2	0.501	<0.00200	0.00200
Total BTEX		98.3	0.503	117	0.398	0.705	0.00199	134	2.00	131	0.501	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Dec-03-18 08:00		Dec-03-18 08:00		Dec-03-18 08:00		Dec-03-18 08:00		Dec-03-18 08:00		Dec-03-18 08:00	
	Analyzed:	Dec-03-18 10:52		Dec-03-18 10:58		Dec-03-18 11:05		Dec-03-18 11:29		Dec-03-18 11:36		Dec-03-18 11:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	416	5.00	4110	25.0	2480	24.9	38500	250	8.48	4.97
TPH by SW8015 Mod	***Extracted:***	Nov-29-18 16:00		Nov-29-18 16:00		Nov-29-18 16:00		Nov-29-18 16:00		Nov-29-18 16:00		Nov-29-18 16:00	
	Analyzed:	Nov-30-18 03:46		Nov-30-18 04:05		Nov-30-18 04:24		Nov-30-18 04:43		Nov-30-18 05:02		Nov-30-18 05:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		4760	74.9	3320	74.7	274	15.0	7040	74.8	5510	74.9	<15.0	15.0
Diesel Range Organics (DRO)		8410	74.9	7240	74.7	1270	15.0	10700	74.8	12200	74.9	29.2	15.0
Motor Oil Range Hydrocarbons (MRO)		90.0	74.9	82.8	74.7	<15.0	15.0	109	74.8	131	74.9	<15.0	15.0
Total TPH		13300	74.9	10600	74.7	1540	15.0	17800	74.8	17800	74.9	29.2	15.0

Jessica Kramer
Project Assistant

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-001	Date Collected:	11.27.18 16.00	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	12.03.18 10.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4760**	74.9	mg/kg	11.30.18 03.46		5
Diesel Range Organics (DRO)	C10C28DRO	**8410**	74.9	mg/kg	11.30.18 03.46		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**90.0**	74.9	mg/kg	11.30.18 03.46		5
Total TPH	PHC635	**13300**	74.9	mg/kg	11.30.18 03.46		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	11.30.18 03.46	
o-Terphenyl	84-15-1	220	%	70-135	11.30.18 03.46	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-001	Date Collected:	11.27.18 16.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.06.18 09.00	Basis:	Wet Weight
Seq Number:	3071866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.576**	0.503	mg/kg	12.06.18 13.48		250
Toluene	108-88-3	**23.6**	0.503	mg/kg	12.06.18 13.48		250
Ethylbenzene	100-41-4	**11.9**	0.503	mg/kg	12.06.18 13.48		250
m,p-Xylenes	179601-23-1	**46.1**	1.01	mg/kg	12.06.18 13.48		250
o-Xylene	95-47-6	**16.1**	0.503	mg/kg	12.06.18 13.48		250
Total Xylenes	1330-20-7	**62.2**	0.503	mg/kg	12.06.18 13.48		250
Total BTEX		**98.3**	0.503	mg/kg	12.06.18 13.48		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.06.18 13.48	
1,4-Difluorobenzene	540-36-3	70	%	70-130	12.06.18 13.48	

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-002	Date Collected:	11.27.18 16.05	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**416**	5.00	mg/kg	12.03.18 10.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3320**	74.7	mg/kg	11.30.18 04.05		5
Diesel Range Organics (DRO)	C10C28DRO	**7240**	74.7	mg/kg	11.30.18 04.05		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**82.8**	74.7	mg/kg	11.30.18 04.05		5
Total TPH	PHC635	**10600**	74.7	mg/kg	11.30.18 04.05		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.30.18 04.05	
o-Terphenyl	84-15-1	198	%	70-135	11.30.18 04.05	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-002	Date Collected:	11.27.18 16.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.06.18 09.00	Basis:	Wet Weight
Seq Number:	3071866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.510**	0.398	mg/kg	12.06.18 13.25		200
Toluene	108-88-3	**24.4**	0.398	mg/kg	12.06.18 13.25		200
Ethylbenzene	100-41-4	**14.7**	0.398	mg/kg	12.06.18 13.25		200
m,p-Xylenes	179601-23-1	**55.8**	0.797	mg/kg	12.06.18 13.25		200
o-Xylene	95-47-6	**21.1**	0.398	mg/kg	12.06.18 13.25		200
Total Xylenes	1330-20-7	**76.9**	0.398	mg/kg	12.06.18 13.25		200
Total BTEX		**117**	0.398	mg/kg	12.06.18 13.25		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	155	%	70-130	12.06.18 13.25	**
1,4-Difluorobenzene	540-36-3	125	%	70-130	12.06.18 13.25	

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-003	Date Collected:	11.27.18 16.15	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4110**	25.0	mg/kg	12.03.18 11.05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**274**	15.0	mg/kg	11.30.18 04.24		1
Diesel Range Organics (DRO)	C10C28DRO	**1270**	15.0	mg/kg	11.30.18 04.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.30.18 04.24	U	1
Total TPH	PHC635	**1540**	15.0	mg/kg	11.30.18 04.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.30.18 04.24	
o-Terphenyl	84-15-1	113	%	70-135	11.30.18 04.24	

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-003	Date Collected:	11.27.18 16.15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.05.18 16.00	Basis:	Wet Weight
Seq Number:	3071910				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.06.18 14.51	U	1
Toluene	108-88-3	**0.0836**	0.00199	mg/kg	12.06.18 14.51		1
Ethylbenzene	100-41-4	**0.116**	0.00199	mg/kg	12.06.18 14.51		1
m,p-Xylenes	179601-23-1	**0.342**	0.00398	mg/kg	12.06.18 14.51		1
o-Xylene	95-47-6	**0.163**	0.00199	mg/kg	12.06.18 14.51		1
Total Xylenes	1330-20-7	**0.505**	0.00199	mg/kg	12.06.18 14.51		1
Total BTEX		**0.705**	0.00199	mg/kg	12.06.18 14.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.06.18 14.51	
4-Bromofluorobenzene	460-00-4	149	%	70-130	12.06.18 14.51	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-004	Date Collected:	11.27.18 16.20	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2480**	24.9	mg/kg	12.03.18 11.29		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**7040**	74.8	mg/kg	11.30.18 04.43		5
Diesel Range Organics (DRO)	C10C28DRO	**10700**	74.8	mg/kg	11.30.18 04.43		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**109**	74.8	mg/kg	11.30.18 04.43		5
Total TPH	PHC635	**17800**	74.8	mg/kg	11.30.18 04.43		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	11.30.18 04.43	
o-Terphenyl	84-15-1	248	%	70-135	11.30.18 04.43	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-004	Date Collected:	11.27.18 16.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.06.18 09.00	Basis:	Wet Weight
Seq Number:	3071866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**4.83**	2.00	mg/kg	12.06.18 16.16		1000
Toluene	108-88-3	**41.4**	2.00	mg/kg	12.06.18 16.16		1000
Ethylbenzene	100-41-4	**16.2**	2.00	mg/kg	12.06.18 16.16		1000
m,p-Xylenes	179601-23-1	**53.8**	4.00	mg/kg	12.06.18 16.16		1000
o-Xylene	95-47-6	**17.3**	2.00	mg/kg	12.06.18 16.16		1000
Total Xylenes	1330-20-7	**71.1**	2.00	mg/kg	12.06.18 16.16		1000
Total BTEX		**134**	2.00	mg/kg	12.06.18 16.16		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	74	%	70-130	12.06.18 16.16	
4-Bromofluorobenzene	460-00-4	74	%	70-130	12.06.18 16.16	

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-005	Date Collected:	11.27.18 16.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38500**	250	mg/kg	12.03.18 11.36		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5510**	74.9	mg/kg	11.30.18 05.02		5
Diesel Range Organics (DRO)	C10C28DRO	**12200**	74.9	mg/kg	11.30.18 05.02		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**131**	74.9	mg/kg	11.30.18 05.02		5
Total TPH	PHC635	**17800**	74.9	mg/kg	11.30.18 05.02		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.30.18 05.02	
o-Terphenyl	84-15-1	275	%	70-135	11.30.18 05.02	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-005	Date Collected:	11.27.18 16.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.06.18 09.00	Basis:	Wet Weight
Seq Number:	3071866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**2.64**	0.501	mg/kg	12.06.18 14.09		250
Toluene	108-88-3	**33.8**	0.501	mg/kg	12.06.18 14.09		250
Ethylbenzene	100-41-4	**15.1**	0.501	mg/kg	12.06.18 14.09		250
m,p-Xylenes	179601-23-1	**58.0**	1.00	mg/kg	12.06.18 14.09		250
o-Xylene	95-47-6	**21.2**	0.501	mg/kg	12.06.18 14.09		250
Total Xylenes	1330-20-7	**79.2**	0.501	mg/kg	12.06.18 14.09		250
Total BTEX		**131**	0.501	mg/kg	12.06.18 14.09		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.06.18 14.09	
4-Bromofluorobenzene	460-00-4	151	%	70-130	12.06.18 14.09	**

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-006	Date Collected:	11.27.18 16.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.03.18 08.00	Basis:	Wet Weight
Seq Number:	3071530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.48**	4.97	mg/kg	12.03.18 11.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.18 16.00	Basis:	Wet Weight
Seq Number:	3071195				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.30.18 05.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.2**	15.0	mg/kg	11.30.18 05.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.30.18 05.21	U	1
Total TPH	PHC635	**29.2**	15.0	mg/kg	11.30.18 05.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.30.18 05.21	
o-Terphenyl	84-15-1	99	%	70-135	11.30.18 05.21	

Certificate of Analytical Results 606837

LT Environmental, Inc., Arvada, CO

PLU 420

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	11.29.18 11.37
Lab Sample Id:	606837-006	Date Collected:	11.27.18 16.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.06.18 09.00	Basis:	Wet Weight
Seq Number:	3071866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.06.18 12.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.06.18 12.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.06.18 12.42	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.06.18 12.42	

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 606837

LT Environmental, Inc.

PLU 420

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3071530 Matrix: Solid Date Prep: 12.03.18
MB Sample Id: 7667216-1-BLK LCS Sample Id: 7667216-1-BKS LCSD Sample Id: 7667216-1-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	270	108	261	104	90-110	3	20	mg/kg	12.03.18 09:32	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3071530 Matrix: Soil Date Prep: 12.03.18
Parent Sample Id: 606836-011 MS Sample Id: 606836-011 S MSD Sample Id: 606836-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	152	249	427	110	422	108	90-110	1	20	mg/kg	12.03.18 09:50	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3071530 Matrix: Soil Date Prep: 12.03.18
Parent Sample Id: 606851-001 MS Sample Id: 606851-001 S MSD Sample Id: 606851-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.41	250	274	107	274	107	90-110	0	20	mg/kg	12.03.18 11:17	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3071195 Matrix: Solid Date Prep: 11.29.18
MB Sample Id: 7667088-1-BLK LCS Sample Id: 7667088-1-BKS LCSD Sample Id: 7667088-1-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	1010	101	996	100	70-135	1	20	mg/kg	11.29.18 21:42	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	997	100	70-135	0	20	mg/kg	11.29.18 21:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		123		118		70-135	%	11.29.18 21:42
o-Terphenyl	110		108		101		70-135	%	11.29.18 21:42

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 606837

LT Environmental, Inc.

PLU 420

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3071195 Matrix: Soil Date Prep: 11.29.18
Parent Sample Id: 606827-001 MS Sample Id: 606827-001 S MSD Sample Id: 606827-001 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)	8.98	997	942	94	1030	102	70-135	9	20	mg/kg	11.29.18 22:39	
Diesel Range Organics (DRO)	<8.10	997	940	94	1020	102	70-135	8	20	mg/kg	11.29.18 22:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		122		70-135	%	11.29.18 22:39
o-Terphenyl	98		105		70-135	%	11.29.18 22:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3071910 Matrix: Solid Date Prep: 12.05.18
MB Sample Id: 7667512-1-BLK LCS Sample Id: 7667512-1-BKS LCSD Sample Id: 7667512-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0964	96	0.0731	73	70-130	27	35	mg/kg	12.06.18 10:08	
Toluene	<0.000456	0.100	0.0951	95	0.0814	81	70-130	16	35	mg/kg	12.06.18 10:08	
Ethylbenzene	<0.000565	0.100	0.102	102	0.0888	89	70-130	14	35	mg/kg	12.06.18 10:08	
m,p-Xylenes	<0.00101	0.200	0.192	96	0.170	85	70-130	12	35	mg/kg	12.06.18 10:08	
o-Xylene	<0.000344	0.100	0.0941	94	0.0853	85	70-130	10	35	mg/kg	12.06.18 10:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		99		93		70-130	%	12.06.18 10:08
4-Bromofluorobenzene	82		101		104		70-130	%	12.06.18 10:08

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3071866 Matrix: Solid Date Prep: 12.06.18
MB Sample Id: 7667490-1-BLK LCS Sample Id: 7667490-1-BKS LCSD Sample Id: 7667490-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.121	120	0.118	118	70-130	3	35	mg/kg	12.06.18 08:27	
Toluene	<0.00201	0.101	0.108	107	0.104	104	70-130	4	35	mg/kg	12.06.18 08:27	
Ethylbenzene	<0.00201	0.101	0.124	123	0.118	118	70-130	5	35	mg/kg	12.06.18 08:27	
m,p-Xylenes	<0.00402	0.201	0.247	123	0.241	120	70-130	2	35	mg/kg	12.06.18 08:27	
o-Xylene	<0.00201	0.101	0.118	117	0.114	114	70-130	3	35	mg/kg	12.06.18 08:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		104		102		70-130	%	12.06.18 08:27
4-Bromofluorobenzene	99		114		108		70-130	%	12.06.18 08:27

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 606837

LT Environmental, Inc.

PLU 420

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3071866 Matrix: Soil Date Prep: 12.06.18
Parent Sample Id: 606955-003 MS Sample Id: 606955-003 S MSD Sample Id: 606955-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00400	0.200	0.0856	43	0.102	51	70-130	17	35	mg/kg	12.06.18 09:09	X
Toluene	<0.00400	0.200	0.0772	39	0.0884	44	70-130	14	35	mg/kg	12.06.18 09:09	X
Ethylbenzene	<0.00400	0.200	0.0796	40	0.0909	45	70-130	13	35	mg/kg	12.06.18 09:09	X
m,p-Xylenes	<0.00800	0.400	0.141	35	0.162	41	70-130	14	35	mg/kg	12.06.18 09:09	X
o-Xylene	<0.00400	0.200	0.0711	36	0.0844	42	70-130	17	35	mg/kg	12.06.18 09:09	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	130		114		70-130	%	12.06.18 09:09
4-Bromofluorobenzene	114		118		70-130	%	12.06.18 09:09

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3071910 Matrix: Soil Date Prep: 12.05.18
Parent Sample Id: 607535-004 MS Sample Id: 607535-004 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0718	72	70-130	mg/kg	12.06.18 10:46	
Toluene	<0.000454	0.0996	0.0422	42	70-130	mg/kg	12.06.18 10:46	X
Ethylbenzene	<0.000563	0.0996	0.0289	29	70-130	mg/kg	12.06.18 10:46	X
m,p-Xylenes	<0.00101	0.199	0.0509	26	70-130	mg/kg	12.06.18 10:46	X
o-Xylene	<0.000343	0.0996	0.0257	26	70-130	mg/kg	12.06.18 10:46	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		70-130	%	12.06.18 10:46
4-Bromofluorobenzene	93		70-130	%	12.06.18 10:46

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

Chain of Custody

Work Order No: 1004837

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	
Company Name:	LT Environmental, Inc., Permian office	Company Name:	
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	PLU 420	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	12/6/18

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4 / 0.3	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	11/27/2018	16:00	0.5'	1	X	X	X
SS02	S		16:05		1	X	X	X
SS03	S		16:15		1	X	X	X
SS04	S		16:20		1	X	X	X
SS05	S		16:30		1	X	X	X
SS06	S		16:40		1	X	X	X

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11/27/2018 18:50	2	Timothy P. Elliott	11/28/18 10:45 AM
3		11/29 1137		4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 22 of 24

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: 11/29/2018 11:37:00 AM

Work Order #: 606837

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: 11/29/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 11/29/2018
Jessica Kramer

Analytical Report 612810

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

31-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

31-JAN-19

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

Reference: XENCO Report No(s): **612810**
PLU 420 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) 612810. 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. 612810 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,

Julian Martinez
Midland Laboratory Director

Sample Cross Reference 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	01-25-19 10:50	2 ft	612810-001
PH01A	S	01-25-19 11:50	7.5 ft	612810-002
PH02	S	01-25-19 12:00	2 ft	612810-003
PH02A	S	01-25-19 13:00	10 ft	612810-004
PH03	S	01-25-19 13:50	5 ft	612810-005
PH03A	S	01-25-19 14:40	9 ft	612810-006
PH04	S	01-25-19 14:55	1 ft	612810-007
PH04A	S	01-25-19 15:10	4 ft	612810-008
PH05	S	01-25-19 15:20	1.5 ft	612810-009
PH05A	S	01-25-19 15:40	4 ft	612810-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 420 Battery

Project ID:
Work Order Number(s): *612810*

Report Date: *31-JAN-19*
Date Received: *01/29/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3077498 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 612810-007,612810-009.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3077576 Inorganic Anions by EPA 300
Lab Sample ID 612810-004 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: 612810-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 612810

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

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

Date Received in Lab: Tue Jan-29-19 01:15 pm
Report Date: 31-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	612810-001		612810-002		612810-003		612810-004		612810-005		612810-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	2- ft		7.5- ft		2- ft		10- ft		5- ft		9- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-25-19 10:50		Jan-25-19 11:50		Jan-25-19 12:00		Jan-25-19 13:00		Jan-25-19 13:50		Jan-25-19 14:40	
BTEX by EPA 8021B	***Extracted:***	Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00	
	Analyzed:	Jan-30-19 03:30		Jan-30-19 03:49		Jan-30-19 07:55		Jan-30-19 04:08		Jan-30-19 04:27		Jan-30-19 05:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	0.00474	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	0.0998	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	0.0193	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	0.0311	0.00403	<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	0.113	0.00202	<0.00199	0.00199	0.00205	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	0.144	0.00202	<0.00199	0.00199	0.00205	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	0.268	0.00202	<0.00199	0.00199	0.00205	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00	
	Analyzed:	Jan-30-19 23:38		Jan-30-19 23:44		Jan-30-19 23:50		Jan-31-19 00:03		Jan-31-19 11:32		Jan-31-19 11:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		32.2	4.99	<4.99	4.99	<4.96	4.96	8.52	4.97	15.7	4.99	29.8	4.96
TPH by SW8015 Mod	***Extracted:***	Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00	
	Analyzed:	Jan-30-19 01:26		Jan-30-19 01:46		Jan-30-19 02:06		Jan-30-19 02:26		Jan-30-19 03:26		Jan-30-19 03:46	
	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	154	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		18.6	15.0	<15.0	15.0	993	15.0	<15.0	15.0	219	15.0	24.8	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	149	15.0	<15.0	15.0	36.8	15.0	<15.0	15.0
Total TPH		18.6	15.0	<15.0	15.0	1300	15.0	<15.0	15.0	256	15.0	24.8	15.0

Julian Martinez
Midland Laboratory Director

Certificate of Analysis Summary 612810

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

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

Date Received in Lab: Tue Jan-29-19 01:15 pm
Report Date: 31-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	612810-007		612810-008		612810-009		612810-010					
	Field Id:	PH04		PH04A		PH05		PH05A					
	Depth:	1- ft		4- ft		1.5- ft		4- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-25-19 14:55		Jan-25-19 15:10		Jan-25-19 15:20		Jan-25-19 15:40					
BTEX by EPA 8021B	***Extracted:***	Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00		Jan-29-19 15:00					
	Analyzed:	Jan-30-19 08:14		Jan-30-19 06:01		Jan-30-19 07:36		Jan-30-19 06:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00202	0.00202	0.00344	0.00200	<0.00200	0.00200				
Toluene		0.0431	0.00199	<0.00202	0.00202	0.0994	0.00200	<0.00200	0.00200				
Ethylbenzene		0.0126	0.00199	<0.00202	0.00202	0.0230	0.00200	<0.00200	0.00200				
m,p-Xylenes		0.0226	0.00398	<0.00403	0.00403	0.0389	0.00399	<0.00400	0.00400				
o-Xylene		0.0664	0.00199	<0.00202	0.00202	0.116	0.00200	<0.00200	0.00200				
Total Xylenes		0.0890	0.00199	<0.00202	0.00202	0.155	0.00200	<0.00200	0.00200				
Total BTEX		0.145	0.00199	<0.00202	0.00202	0.281	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00		Jan-30-19 11:00					
	Analyzed:	Jan-31-19 00:27		Jan-31-19 00:49		Jan-31-19 00:55		Jan-31-19 01:01					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1460	25.0	50.3	4.99	147	4.95	<4.95	4.95				
TPH by SW8015 Mod	***Extracted:***	Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00		Jan-29-19 16:00					
	Analyzed:	Jan-30-19 04:06		Jan-30-19 04:26		Jan-30-19 04:46		Jan-30-19 05:06					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		247	15.0	<15.0	15.0	234	14.9	<15.0	15.0				
Diesel Range Organics (DRO)		1960	15.0	<15.0	15.0	1260	14.9	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		300	15.0	<15.0	15.0	202	14.9	<15.0	15.0				
Total TPH		2510	15.0	<15.0	15.0	1700	14.9	<15.0	15.0				

Julian Martinez
Midland Laboratory Director

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-001	Date Collected:	01.25.19 10.50	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.2**	4.99	mg/kg	01.30.19 23.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 01.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.6**	15.0	mg/kg	01.30.19 01.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 01.26	U	1
Total TPH	PHC635	**18.6**	15.0	mg/kg	01.30.19 01.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.30.19 01.26	
o-Terphenyl	84-15-1	100	%	70-135	01.30.19 01.26	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-001	Date Collected:	01.25.19 10.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.30.19 03.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.30.19 03.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.30.19 03.30	
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.30.19 03.30	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-002	Date Collected:	01.25.19 11.50	Sample Depth:	7.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.30.19 23.44	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 01.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.30.19 01.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 01.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.30.19 01.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	01.30.19 01.46	
o-Terphenyl	84-15-1	99	%	70-135	01.30.19 01.46	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-002	Date Collected:	01.25.19 11.50	Sample Depth:	7.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.30.19 03.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.30.19 03.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.30.19 03.49	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.30.19 03.49	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-003	Date Collected:	01.25.19 12.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.30.19 23.50	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**154**	15.0	mg/kg	01.30.19 02.06		1
Diesel Range Organics (DRO)	C10C28DRO	**993**	15.0	mg/kg	01.30.19 02.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**149**	15.0	mg/kg	01.30.19 02.06		1
Total TPH	PHC635	**1300**	15.0	mg/kg	01.30.19 02.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.30.19 02.06	
o-Terphenyl	84-15-1	119	%	70-135	01.30.19 02.06	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-003	Date Collected:	01.25.19 12.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00474**	0.00202	mg/kg	01.30.19 07.55		1
Toluene	108-88-3	**0.0998**	0.00202	mg/kg	01.30.19 07.55		1
Ethylbenzene	100-41-4	**0.0193**	0.00202	mg/kg	01.30.19 07.55		1
m,p-Xylenes	179601-23-1	**0.0311**	0.00403	mg/kg	01.30.19 07.55		1
o-Xylene	95-47-6	**0.113**	0.00202	mg/kg	01.30.19 07.55		1
Total Xylenes	1330-20-7	**0.144**	0.00202	mg/kg	01.30.19 07.55		1
Total BTEX		**0.268**	0.00202	mg/kg	01.30.19 07.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.30.19 07.55	
4-Bromofluorobenzene	460-00-4	76	%	70-130	01.30.19 07.55	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-004	Date Collected:	01.25.19 13.00	Sample Depth:	10 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.52**	4.97	mg/kg	01.31.19 00.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 02.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.30.19 02.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 02.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.30.19 02.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.30.19 02.26	
o-Terphenyl	84-15-1	99	%	70-135	01.30.19 02.26	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-004	Date Collected:	01.25.19 13.00	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.30.19 04.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.30.19 04.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.30.19 04.08	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.30.19 04.08	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-005	Date Collected:	01.25.19 13.50	Sample Depth:	5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.7**	4.99	mg/kg	01.31.19 11.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 03.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**219**	15.0	mg/kg	01.30.19 03.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**36.8**	15.0	mg/kg	01.30.19 03.26		1
Total TPH	PHC635	**256**	15.0	mg/kg	01.30.19 03.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.30.19 03.26	
o-Terphenyl	84-15-1	102	%	70-135	01.30.19 03.26	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-005	Date Collected:	01.25.19 13.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.19 04.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.19 04.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.19 04.27	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.30.19 04.27	U	1
o-Xylene	95-47-6	**0.00205**	0.00200	mg/kg	01.30.19 04.27		1
Total Xylenes	1330-20-7	**0.00205**	0.00200	mg/kg	01.30.19 04.27		1
Total BTEX		**0.00205**	0.00200	mg/kg	01.30.19 04.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.30.19 04.27	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.30.19 04.27	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-006	Date Collected:	01.25.19 14.40	Sample Depth:	9 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.8**	4.96	mg/kg	01.31.19 11.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 03.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**24.8**	15.0	mg/kg	01.30.19 03.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 03.46	U	1
Total TPH	PHC635	**24.8**	15.0	mg/kg	01.30.19 03.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.30.19 03.46	
o-Terphenyl	84-15-1	98	%	70-135	01.30.19 03.46	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-006	Date Collected:	01.25.19 14.40	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.30.19 05.42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.30.19 05.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.30.19 05.42	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.30.19 05.42	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-007	Date Collected:	01.25.19 14.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1460**	25.0	mg/kg	01.31.19 00.27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**247**	15.0	mg/kg	01.30.19 04.06		1
Diesel Range Organics (DRO)	C10C28DRO	**1960**	15.0	mg/kg	01.30.19 04.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**300**	15.0	mg/kg	01.30.19 04.06		1
Total TPH	PHC635	**2510**	15.0	mg/kg	01.30.19 04.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	01.30.19 04.06	
o-Terphenyl	84-15-1	125	%	70-135	01.30.19 04.06	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-007	Date Collected:	01.25.19 14.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.30.19 08.14	U	1
Toluene	108-88-3	**0.0431**	0.00199	mg/kg	01.30.19 08.14		1
Ethylbenzene	100-41-4	**0.0126**	0.00199	mg/kg	01.30.19 08.14		1
m,p-Xylenes	179601-23-1	**0.0226**	0.00398	mg/kg	01.30.19 08.14		1
o-Xylene	95-47-6	**0.0664**	0.00199	mg/kg	01.30.19 08.14		1
Total Xylenes	1330-20-7	**0.0890**	0.00199	mg/kg	01.30.19 08.14		1
Total BTEX		**0.145**	0.00199	mg/kg	01.30.19 08.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	162	%	70-130	01.30.19 08.14	**
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.30.19 08.14	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-008	Date Collected:	01.25.19 15.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**50.3**	4.99	mg/kg	01.31.19 00.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 04.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.30.19 04.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 04.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.30.19 04.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.30.19 04.26	
o-Terphenyl	84-15-1	96	%	70-135	01.30.19 04.26	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-008	Date Collected:	01.25.19 15.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.30.19 06.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.30.19 06.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.30.19 06.01	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.30.19 06.01	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-009	Date Collected:	01.25.19 15.20	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**147**	4.95	mg/kg	01.31.19 00.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**234**	14.9	mg/kg	01.30.19 04.46		1
Diesel Range Organics (DRO)	C10C28DRO	**1260**	14.9	mg/kg	01.30.19 04.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**202**	14.9	mg/kg	01.30.19 04.46		1
Total TPH	PHC635	**1700**	14.9	mg/kg	01.30.19 04.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.30.19 04.46	
o-Terphenyl	84-15-1	123	%	70-135	01.30.19 04.46	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-009	Date Collected:	01.25.19 15.20	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00344**	0.00200	mg/kg	01.30.19 07.36		1
Toluene	108-88-3	**0.0994**	0.00200	mg/kg	01.30.19 07.36		1
Ethylbenzene	100-41-4	**0.0230**	0.00200	mg/kg	01.30.19 07.36		1
m,p-Xylenes	179601-23-1	**0.0389**	0.00399	mg/kg	01.30.19 07.36		1
o-Xylene	95-47-6	**0.116**	0.00200	mg/kg	01.30.19 07.36		1
Total Xylenes	1330-20-7	**0.155**	0.00200	mg/kg	01.30.19 07.36		1
Total BTEX		**0.281**	0.00200	mg/kg	01.30.19 07.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.30.19 07.36	
4-Bromofluorobenzene	460-00-4	168	%	70-130	01.30.19 07.36	**

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-010	Date Collected:	01.25.19 15.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.30.19 11.00	Basis:	Wet Weight
Seq Number:	3077576				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	01.31.19 01.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.29.19 16.00	Basis:	Wet Weight
Seq Number:	3077483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.30.19 05.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.30.19 05.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.30.19 05.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.30.19 05.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.30.19 05.06	
o-Terphenyl	84-15-1	98	%	70-135	01.30.19 05.06	

Certificate of Analytical Results 612810

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	01.29.19 13.15
Lab Sample Id:	612810-010	Date Collected:	01.25.19 15.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.29.19 15.00	Basis:	Wet Weight
Seq Number:	3077498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.30.19 06.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.30.19 06.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.30.19 06.20	
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.30.19 06.20	

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 612810

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077576 Matrix: Solid Date Prep: 01.30.19
MB Sample Id: 7670788-1-BLK LCS Sample Id: 7670788-1-BKS LCSD Sample Id: 7670788-1-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	258	103	254	102	90-110	2	20	mg/kg	01.30.19 22:20	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077576 Matrix: Soil Date Prep: 01.30.19
Parent Sample Id: 612806-001 MS Sample Id: 612806-001 S MSD Sample Id: 612806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	342	250	611	108	602	104	90-110	1	20	mg/kg	01.30.19 22:39	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077576 Matrix: Soil Date Prep: 01.30.19
Parent Sample Id: 612810-004 MS Sample Id: 612810-004 S MSD Sample Id: 612810-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.52	249	286	111	268	104	90-110	6	20	mg/kg	01.31.19 00:09	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3077483 Matrix: Solid Date Prep: 01.29.19
MB Sample Id: 7670692-1-BLK LCS Sample Id: 7670692-1-BKS LCSD Sample Id: 7670692-1-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	924	92	930	93	70-135	1	20	mg/kg	01.29.19 22:07	
Diesel Range Organics (DRO)	<8.13	1000	1040	104	1050	105	70-135	1	20	mg/kg	01.29.19 22:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		126		127		70-135	%	01.29.19 22:07
o-Terphenyl	106		115		118		70-135	%	01.29.19 22:07

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 612810

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3077483 Matrix: Soil Date Prep: 01.29.19
Parent Sample Id: 612806-001 MS Sample Id: 612806-001 S MSD Sample Id: 612806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	884	88	911	91	70-135	3	20	mg/kg	01.29.19 23:07	
Diesel Range Organics (DRO)	<8.12	999	888	89	933	94	70-135	5	20	mg/kg	01.29.19 23:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		127		70-135	%	01.29.19 23:07
o-Terphenyl	114		118		70-135	%	01.29.19 23:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3077498 Matrix: Solid Date Prep: 01.29.19
MB Sample Id: 7670733-1-BLK LCS Sample Id: 7670733-1-BKS LCSD Sample Id: 7670733-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.108	107	0.105	105	70-130	3	35	mg/kg	01.29.19 23:44	
Toluene	<0.000459	0.101	0.0959	95	0.0937	94	70-130	2	35	mg/kg	01.29.19 23:44	
Ethylbenzene	<0.000569	0.101	0.0913	90	0.0893	90	70-130	2	35	mg/kg	01.29.19 23:44	
m,p-Xylenes	<0.00102	0.202	0.177	88	0.175	88	70-130	1	35	mg/kg	01.29.19 23:44	
o-Xylene	<0.000347	0.101	0.0905	90	0.0887	89	70-130	2	35	mg/kg	01.29.19 23:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		107		107		70-130	%	01.29.19 23:44
4-Bromofluorobenzene	95		103		102		70-130	%	01.29.19 23:44

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3077498 Matrix: Soil Date Prep: 01.29.19
Parent Sample Id: 612806-001 MS Sample Id: 612806-001 S MSD Sample Id: 612806-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.101	101	0.0997	100	70-130	1	35	mg/kg	01.30.19 00:22	
Toluene	<0.000457	0.100	0.0903	90	0.0889	89	70-130	2	35	mg/kg	01.30.19 00:22	
Ethylbenzene	<0.000566	0.100	0.0858	86	0.0848	85	70-130	1	35	mg/kg	01.30.19 00:22	
m,p-Xylenes	<0.00102	0.200	0.168	84	0.167	83	70-130	1	35	mg/kg	01.30.19 00:22	
o-Xylene	<0.000345	0.100	0.0848	85	0.0839	84	70-130	1	35	mg/kg	01.30.19 00:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	01.30.19 00:22
4-Bromofluorobenzene	108		106		70-130	%	01.30.19 00:22

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

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote #: | Xenco Job #: 612810

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. Permian Office

Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705

Email: abyers@ltenv.com, abaker@ltenv.com | Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name: Anna Byers

Project Information

Project Name/Number: PLU 420 Battery

Project Location: 2RP6102

Invoice To: XTO : Kyle Littrell

PO Number:

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	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Field Comments
1	PH01	2'	1/25	10:50	S	1								X	X	X	X	
2	PH01A	7.5'		11:50	S	1								X	X	X	X	
3	PH02	2'		12:00	S	1								X	X	X	X	
4	PH02A	10'		13:00	S	1								X	X	X	X	
5	PH03	5'		13:50	S	1								X	X	X	X	
6	PH03A	9'		14:40	S	1								X	X	X	X	
7	PH04	1'		14:55	S	1								X	X	X	X	
8	PH04A	4'		15:10	S	1								X	X	X	X	
9	PH05	1.5'		15:20	S	1								X	X	X	X	
10	PH05A	4'	↓	15:40	S	1								X	X	X	X	

Turnaround Time (Business days)

- [X] Same Day TAT
- [ ] 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
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

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	Anna Byers	1/25/19 1855			01/25/19 12:07	Timothy R. Elliott
2						
3	Relinquished by:	Date Time: 1/28/19 1530	Received By: 1/29/19 1300	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: ✓ Cooler Temp: 1.5/1.4 Thermo. Corr. Factor: R8 -0.1

Notice: 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 loses 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.

77433120 8038

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01/29/2019 01:15:00 PM

Work Order #: 612810

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)?	1.4
#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)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 01/29/2019

Checklist reviewed by: Jessica Kramer Date: 01/29/2019

Jessica Kramer

Analytical Report 613219

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

04-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)
Xenco-Lakeland: Florida (E84098)

04-FEB-19

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

Reference: XENCO Report No(s): **613219**
PLU 420 Battery
Project Address: Eddy County

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) 613219. 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. 613219 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-30-19 15:15	4 ft	613219-001
FS02	S	01-30-19 15:20	4 ft	613219-002
FS03	S	01-30-19 15:30	4 ft	613219-003
FS04	S	01-30-19 15:35	4 ft	613219-004
SW01	S	01-30-19 14:00	0 - 4 ft	613219-005
SW02	S	01-30-19 14:15	0 - 4 ft	613219-006
SW03	S	01-30-19 14:30	0 - 4 ft	613219-007
SW04	S	01-30-19 14:45	0 - 4 ft	613219-008

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3077978 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 613219-003,613219-008,613219-007,613219-005.
Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 613219-007.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 613219

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Feb-01-19 12:45 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613219-001		613219-002		613219-003		613219-004		613219-005		613219-006	
	Field Id:	FS01		FS02		FS03		FS04		SW01		SW02	
	Depth:	4- ft		4- ft		4- ft		4- ft		0-4 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-30-19 15:15		Jan-30-19 15:20		Jan-30-19 15:30		Jan-30-19 15:35		Jan-30-19 14:00		Jan-30-19 14:15	
BTEX by EPA 8021B	***Extracted:***	Feb-01-19 15:00		Feb-01-19 15:00		Feb-01-19 15:00		Feb-01-19 15:00		Feb-01-19 15:00		Feb-01-19 15:00	
	Analyzed:	Feb-01-19 21:52		Feb-01-19 22:12		Feb-01-19 23:37		Feb-01-19 23:59		Feb-02-19 00:20		Feb-02-19 00:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	0.00529	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		0.00246	0.00200	<0.00201	0.00201	0.0286	0.00200	0.112	0.00202	0.0512	0.00200	0.00675	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	0.0311	0.00200	0.0443	0.00202	0.0520	0.00200	0.0133	0.00201
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402	0.130	0.00399	0.179	0.00403	0.213	0.00400	0.0625	0.00402
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	0.0588	0.00200	0.0830	0.00202	0.115	0.00200	0.0454	0.00201
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	0.189	0.00200	0.262	0.00202	0.328	0.00200	0.108	0.00201
Total BTEX		0.00246	0.00200	<0.00201	0.00201	0.249	0.00200	0.424	0.00202	0.431	0.00200	0.128	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Feb-02-19 12:00		Feb-02-19 12:00		Feb-02-19 12:00		Feb-02-19 12:00		Feb-02-19 12:00		Feb-02-19 12:00	
	Analyzed:	Feb-02-19 17:07		Feb-02-19 17:28		Feb-02-19 17:34		Feb-02-19 17:41		Feb-02-19 17:47		Feb-02-19 17:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		254	5.03	<5.00	5.00	325	5.01	79.8	5.01	770	4.96	14.9	4.99
TPH by SW8015 Mod	***Extracted:***	Feb-02-19 08:00		Feb-02-19 08:00		Feb-02-19 08:00		Feb-02-19 08:00		Feb-02-19 08:00		Feb-02-19 08:00	
	Analyzed:	Feb-02-19 20:44		Feb-02-19 21:43		Feb-02-19 22:03		Feb-02-19 22:22		Feb-02-19 22:42		Feb-02-19 23:02	
	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	58.0	15.0	162	15.0	76.3	15.0	16.2	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	559	15.0	883	15.0	583	15.0	177	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	103	15.0	165	15.0	103	15.0	30.8	15.0
Total TPH		<15.0	15.0	<14.9	14.9	720	15.0	1210	15.0	762	15.0	224	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613219

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Feb-01-19 12:45 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	613219-007		613219-008					
	Field Id:	SW03		SW04					
	Depth:	0-4 ft		0-4 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-30-19 14:30		Jan-30-19 14:45					
BTEX by EPA 8021B	***Extracted:***	Feb-01-19 15:00		Feb-01-19 15:00					
	Analyzed:	Feb-02-19 01:03		Feb-02-19 01:24					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		0.0134	0.00200	0.0308	0.00200				
Ethylbenzene		0.0404	0.00200	0.0450	0.00200				
m,p-Xylenes		0.172	0.00399	0.222	0.00401				
o-Xylene		0.0703	0.00200	0.107	0.00200				
Total Xylenes		0.242	0.00200	0.329	0.00200				
Total BTEX		0.296	0.00200	0.405	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-02-19 12:00		Feb-02-19 12:00					
	Analyzed:	Feb-02-19 17:59		Feb-02-19 18:05					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		243	4.97	218	4.98				
TPH by SW8015 Mod	***Extracted:***	Feb-02-19 08:00		Feb-02-19 08:00					
	Analyzed:	Feb-02-19 23:22		Feb-02-19 23:42					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		26.3	14.9	104	15.0				
Diesel Range Organics (DRO)		388	14.9	908	15.0				
Motor Oil Range Hydrocarbons (MRO)		63.8	14.9	174	15.0				
Total TPH		478	14.9	1190	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-001	Date Collected:	01.30.19 15.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**254**	5.03	mg/kg	02.02.19 17.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.02.19 20.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.02.19 20.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.02.19 20.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.02.19 20.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.02.19 20.44	
o-Terphenyl	84-15-1	100	%	70-135	02.02.19 20.44	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-001	Date Collected:	01.30.19 15.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.01.19 21.52	U	1
Toluene	108-88-3	**0.00246**	0.00200	mg/kg	02.01.19 21.52		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.01.19 21.52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.01.19 21.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.01.19 21.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.01.19 21.52	U	1
Total BTEX		**0.00246**	0.00200	mg/kg	02.01.19 21.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.01.19 21.52	
1,4-Difluorobenzene	540-36-3	92	%	70-130	02.01.19 21.52	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-002	Date Collected:	01.30.19 15.20	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.02.19 17.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.02.19 21.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.02.19 21.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.02.19 21.43	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.02.19 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.02.19 21.43	
o-Terphenyl	84-15-1	97	%	70-135	02.02.19 21.43	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-002	Date Collected:	01.30.19 15.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.01.19 22.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.01.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.01.19 22.12	
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.01.19 22.12	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-003	Date Collected:	01.30.19 15.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**325**	5.01	mg/kg	02.02.19 17.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**58.0**	15.0	mg/kg	02.02.19 22.03		1
Diesel Range Organics (DRO)	C10C28DRO	**559**	15.0	mg/kg	02.02.19 22.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**103**	15.0	mg/kg	02.02.19 22.03		1
Total TPH	PHC635	**720**	15.0	mg/kg	02.02.19 22.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.02.19 22.03	
o-Terphenyl	84-15-1	119	%	70-135	02.02.19 22.03	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-003	Date Collected:	01.30.19 15.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.01.19 23.37	U	1
Toluene	108-88-3	**0.0286**	0.00200	mg/kg	02.01.19 23.37		1
Ethylbenzene	100-41-4	**0.0311**	0.00200	mg/kg	02.01.19 23.37		1
m,p-Xylenes	179601-23-1	**0.130**	0.00399	mg/kg	02.01.19 23.37		1
o-Xylene	95-47-6	**0.0588**	0.00200	mg/kg	02.01.19 23.37		1
Total Xylenes	1330-20-7	**0.189**	0.00200	mg/kg	02.01.19 23.37		1
Total BTEX		**0.249**	0.00200	mg/kg	02.01.19 23.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.01.19 23.37	
4-Bromofluorobenzene	460-00-4	144	%	70-130	02.01.19 23.37	**

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-004	Date Collected:	01.30.19 15.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**79.8**	5.01	mg/kg	02.02.19 17.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**162**	15.0	mg/kg	02.02.19 22.22		1
Diesel Range Organics (DRO)	C10C28DRO	**883**	15.0	mg/kg	02.02.19 22.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**165**	15.0	mg/kg	02.02.19 22.22		1
Total TPH	PHC635	**1210**	15.0	mg/kg	02.02.19 22.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.02.19 22.22	
o-Terphenyl	84-15-1	118	%	70-135	02.02.19 22.22	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-004	Date Collected:	01.30.19 15.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00529**	0.00202	mg/kg	02.01.19 23.59		1
Toluene	108-88-3	**0.112**	0.00202	mg/kg	02.01.19 23.59		1
Ethylbenzene	100-41-4	**0.0443**	0.00202	mg/kg	02.01.19 23.59		1
m,p-Xylenes	179601-23-1	**0.179**	0.00403	mg/kg	02.01.19 23.59		1
o-Xylene	95-47-6	**0.0830**	0.00202	mg/kg	02.01.19 23.59		1
Total Xylenes	1330-20-7	**0.262**	0.00202	mg/kg	02.01.19 23.59		1
Total BTEX		**0.424**	0.00202	mg/kg	02.01.19 23.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	70-130	02.01.19 23.59	
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.01.19 23.59	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-005	Date Collected:	01.30.19 14.00	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**770**	4.96	mg/kg	02.02.19 17.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**76.3**	15.0	mg/kg	02.02.19 22.42		1
Diesel Range Organics (DRO)	C10C28DRO	**583**	15.0	mg/kg	02.02.19 22.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**103**	15.0	mg/kg	02.02.19 22.42		1
Total TPH	PHC635	**762**	15.0	mg/kg	02.02.19 22.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.02.19 22.42	
o-Terphenyl	84-15-1	111	%	70-135	02.02.19 22.42	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-005	Date Collected:	01.30.19 14.00	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.02.19 00.20	U	1
Toluene	108-88-3	**0.0512**	0.00200	mg/kg	02.02.19 00.20		1
Ethylbenzene	100-41-4	**0.0520**	0.00200	mg/kg	02.02.19 00.20		1
m,p-Xylenes	179601-23-1	**0.213**	0.00400	mg/kg	02.02.19 00.20		1
o-Xylene	95-47-6	**0.115**	0.00200	mg/kg	02.02.19 00.20		1
Total Xylenes	1330-20-7	**0.328**	0.00200	mg/kg	02.02.19 00.20		1
Total BTEX		**0.431**	0.00200	mg/kg	02.02.19 00.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	147	%	70-130	02.02.19 00.20	**
1,4-Difluorobenzene	540-36-3	85	%	70-130	02.02.19 00.20	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-006	Date Collected:	01.30.19 14.15	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.9**	4.99	mg/kg	02.02.19 17.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.2**	15.0	mg/kg	02.02.19 23.02		1
Diesel Range Organics (DRO)	C10C28DRO	**177**	15.0	mg/kg	02.02.19 23.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**30.8**	15.0	mg/kg	02.02.19 23.02		1
Total TPH	PHC635	**224**	15.0	mg/kg	02.02.19 23.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.02.19 23.02	
o-Terphenyl	84-15-1	105	%	70-135	02.02.19 23.02	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-006	Date Collected:	01.30.19 14.15	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.02.19 00.42	U	1
Toluene	108-88-3	**0.00675**	0.00201	mg/kg	02.02.19 00.42		1
Ethylbenzene	100-41-4	**0.0133**	0.00201	mg/kg	02.02.19 00.42		1
m,p-Xylenes	179601-23-1	**0.0625**	0.00402	mg/kg	02.02.19 00.42		1
o-Xylene	95-47-6	**0.0454**	0.00201	mg/kg	02.02.19 00.42		1
Total Xylenes	1330-20-7	**0.108**	0.00201	mg/kg	02.02.19 00.42		1
Total BTEX		**0.128**	0.00201	mg/kg	02.02.19 00.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.02.19 00.42	
4-Bromofluorobenzene	460-00-4	120	%	70-130	02.02.19 00.42	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-007	Date Collected:	01.30.19 14.30	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**243**	4.97	mg/kg	02.02.19 17.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**26.3**	14.9	mg/kg	02.02.19 23.22		1
Diesel Range Organics (DRO)	C10C28DRO	**388**	14.9	mg/kg	02.02.19 23.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**63.8**	14.9	mg/kg	02.02.19 23.22		1
Total TPH	PHC635	**478**	14.9	mg/kg	02.02.19 23.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.02.19 23.22	
o-Terphenyl	84-15-1	103	%	70-135	02.02.19 23.22	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-007	Date Collected:	01.30.19 14.30	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.02.19 01.03	U	1
Toluene	108-88-3	**0.0134**	0.00200	mg/kg	02.02.19 01.03		1
Ethylbenzene	100-41-4	**0.0404**	0.00200	mg/kg	02.02.19 01.03		1
m,p-Xylenes	179601-23-1	**0.172**	0.00399	mg/kg	02.02.19 01.03		1
o-Xylene	95-47-6	**0.0703**	0.00200	mg/kg	02.02.19 01.03		1
Total Xylenes	1330-20-7	**0.242**	0.00200	mg/kg	02.02.19 01.03		1
Total BTEX		**0.296**	0.00200	mg/kg	02.02.19 01.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	219	%	70-130	02.02.19 01.03	**
1,4-Difluorobenzene	540-36-3	133	%	70-130	02.02.19 01.03	**

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-008	Date Collected:	01.30.19 14.45	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.02.19 12.00	Basis:	Wet Weight
Seq Number:	3077881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**218**	4.98	mg/kg	02.02.19 18.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.02.19 08.00	Basis:	Wet Weight
Seq Number:	3077970				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**104**	15.0	mg/kg	02.02.19 23.42		1
Diesel Range Organics (DRO)	C10C28DRO	**908**	15.0	mg/kg	02.02.19 23.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**174**	15.0	mg/kg	02.02.19 23.42		1
Total TPH	PHC635	**1190**	15.0	mg/kg	02.02.19 23.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.02.19 23.42	
o-Terphenyl	84-15-1	112	%	70-135	02.02.19 23.42	

Certificate of Analytical Results 613219

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.01.19 12.45
Lab Sample Id:	613219-008	Date Collected:	01.30.19 14.45	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.01.19 15.00	Basis:	Wet Weight
Seq Number:	3077978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.02.19 01.24	U	1
Toluene	108-88-3	**0.0308**	0.00200	mg/kg	02.02.19 01.24		1
Ethylbenzene	100-41-4	**0.0450**	0.00200	mg/kg	02.02.19 01.24		1
m,p-Xylenes	179601-23-1	**0.222**	0.00401	mg/kg	02.02.19 01.24		1
o-Xylene	95-47-6	**0.107**	0.00200	mg/kg	02.02.19 01.24		1
Total Xylenes	1330-20-7	**0.329**	0.00200	mg/kg	02.02.19 01.24		1
Total BTEX		**0.405**	0.00200	mg/kg	02.02.19 01.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	169	%	70-130	02.02.19 01.24	**
1,4-Difluorobenzene	540-36-3	116	%	70-130	02.02.19 01.24	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 613219

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077881 Matrix: Solid Date Prep: 02.02.19
MB Sample Id: 7670927-1-BLK LCS Sample Id: 7670927-1-BKS LCSD Sample Id: 7670927-1-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	236	94	253	101	90-110	7	20	mg/kg	02.02.19 15:00	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077881 Matrix: Soil Date Prep: 02.02.19
Parent Sample Id: 613150-003 MS Sample Id: 613150-003 S MSD Sample Id: 613150-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.49	250	264	105	271	107	90-110	3	20	mg/kg	02.02.19 15:18	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3077881 Matrix: Soil Date Prep: 02.02.19
Parent Sample Id: 613218-007 MS Sample Id: 613218-007 S MSD Sample Id: 613218-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.80	248	268	107	269	107	90-110	0	20	mg/kg	02.02.19 16:48	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3077970 Matrix: Solid Date Prep: 02.02.19
MB Sample Id: 7671016-1-BLK LCS Sample Id: 7671016-1-BKS LCSD Sample Id: 7671016-1-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	858	86	868	87	70-135	1	20	mg/kg	02.02.19 20:05	
Diesel Range Organics (DRO)	<8.13	1000	948	95	958	96	70-135	1	20	mg/kg	02.02.19 20:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		121		122		70-135	%	02.02.19 20:05
o-Terphenyl	106		102		102		70-135	%	02.02.19 20:05

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 613219

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3077970 Matrix: Soil Date Prep: 02.02.19
Parent Sample Id: 613219-001 MS Sample Id: 613219-001 S MSD Sample Id: 613219-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	813	81	836	84	70-135	3	20	mg/kg	02.02.19 21:03	
Diesel Range Organics (DRO)	<8.12	999	907	91	940	94	70-135	4	20	mg/kg	02.02.19 21:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	02.02.19 21:03
o-Terphenyl	119		110		70-135	%	02.02.19 21:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3077978 Matrix: Solid Date Prep: 02.01.19
MB Sample Id: 7670964-1-BLK LCS Sample Id: 7670964-1-BKS LCSD Sample Id: 7670964-1-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	0.0888	89	0.0920	91	70-130	4	35	mg/kg	02.01.19 16:53	
Toluene	<0.00200	0.0998	0.0800	80	0.0794	79	70-130	1	35	mg/kg	02.01.19 16:53	
Ethylbenzene	<0.00200	0.0998	0.0875	88	0.0888	88	70-130	1	35	mg/kg	02.01.19 16:53	
m,p-Xylenes	<0.00399	0.200	0.172	86	0.178	89	70-130	3	35	mg/kg	02.01.19 16:53	
o-Xylene	<0.00200	0.0998	0.0795	80	0.0817	81	70-130	3	35	mg/kg	02.01.19 16:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		113		114		70-130	%	02.01.19 16:53
4-Bromofluorobenzene	89		96		98		70-130	%	02.01.19 16:53

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3077978 Matrix: Soil Date Prep: 02.01.19
Parent Sample Id: 613218-001 MS Sample Id: 613218-001 S MSD Sample Id: 613218-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0744	74	0.0693	69	70-130	7	35	mg/kg	02.01.19 17:37	X
Toluene	<0.00202	0.101	0.0556	55	0.0538	54	70-130	3	35	mg/kg	02.01.19 17:37	X
Ethylbenzene	<0.00202	0.101	0.0624	62	0.0621	62	70-130	0	35	mg/kg	02.01.19 17:37	X
m,p-Xylenes	0.00271	0.202	0.126	61	0.120	58	70-130	5	35	mg/kg	02.01.19 17:37	X
o-Xylene	<0.00202	0.101	0.0566	56	0.0568	57	70-130	0	35	mg/kg	02.01.19 17:37	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	121		115		70-130	%	02.01.19 17:37
4-Bromofluorobenzene	119		90		70-130	%	02.01.19 17:37

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

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Xenco Quote # | Xenco Job # 613219

Client / Reporting Information

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Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abayess@ltenv.com; abaker@ltenv.com Phone No: (575) 390-6754 (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Anna Byers

Project Information

Project Name/Number: PLU 420 Battery
Project Location: Eddy County 2RP5102
Invoice To: XTO : Kyle Littrell
PO Number:

Analytical Information

No.	Field ID / Point of Collection	Sample Depth	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX (only BTEX) 8021	TPH (DRO GRO MRO) 8015	Chloride (300.00)
1	FS01	4'	1/30	1515	S	1								X	X	X	X
2	FS02	4'	1/30	1520	S	1								X	X	X	X
3	FS03	4'	1/30	1530	S	1								X	X	X	X
4	FS04	4'	1/30	1535	S	1								X	X	X	X
5	SW01	0-4'	1/30	1400	S	1								X	X	X	X
6	SW02	0-4'	1/30	1415	S	1								X	X	X	X
7	SW03	0-4'	1/30	1430	S	1								X	X	X	X
8	SW04	0-4'	1/30	1445	S	1								X	X	X	X
9																	
10																	

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

Field Comments

Turnaround Time (Business days)

- [X] Same Day TAT
- [ ] 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
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

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

Relinquished by Sampler: 1 Anna Byers	Date Time: 1/31/19 1500	Received By: 1	Relinquished By: 2	Date Time: 1/31 1530	Received By: 2	2/1/19 1245
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: Y	Cooler Temp. 3.6 3.5	Thermo. Corr. Factor R8 -0.1

Notice: 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 loses 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.

7743 6505 4577

Final 1.000

Page 26 of 27

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/01/2019 12:45:00 PM

Work Order #: 613219

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/01/2019

Checklist reviewed by: Jessica Kramer Date: 02/01/2019

Jessica Kramer

Analytical Report 613312

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

05-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)
Xenco-Lakeland: Florida (E84098)

05-FEB-19

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

Reference: XENCO Report No(s): **613312**
PLU 420 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) 613312. 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. 613312 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS05	S	01-31-19 11:50	2.5 ft	613312-001
FS06	S	01-31-19 12:00	2.5 ft	613312-002
FS07	S	01-31-19 12:15	2.5 ft	613312-003
FS08	S	01-31-19 12:30	2.5 ft	613312-004
FS09	S	01-31-19 12:35	2.5 ft	613312-005
SW05	S	01-31-19 12:45	0 - 2.5 ft	613312-006
SW06	S	01-31-19 12:50	0 - 2.5 ft	613312-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078004 Inorganic Anions by EPA 300
Lab Sample ID 613312-004 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: 613312-001, -002, -003, -004, -005, -006, -007.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3078044 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 613312-001,613312-006,613312-005.

Certificate of Analysis Summary 613312

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Feb-04-19 08:00 am
Report Date: 05-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613312-001		613312-002		613312-003		613312-004		613312-005		613312-006	
	Field Id:	FS05		FS06		FS07		FS08		FS09		SW05	
	Depth:	2.5- ft		2.5- ft		2.5- ft		2.5- ft		2.5- ft		0-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 11:50		Jan-31-19 12:00		Jan-31-19 12:15		Jan-31-19 12:30		Jan-31-19 12:35		Jan-31-19 12:45	
BTEX by EPA 8021B	***Extracted:***	Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00	
	Analyzed:	Feb-04-19 19:26		Feb-04-19 19:48		Feb-04-19 20:09		Feb-04-19 20:31		Feb-04-19 20:52		Feb-04-19 21:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	0.00595	0.00201
Ethylbenzene		0.0145	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	0.00945	0.00200	0.0439	0.00201
m,p-Xylenes		0.0372	0.00402	<0.00400	0.00400	<0.00401	0.00401	<0.00398	0.00398	0.0257	0.00400	0.127	0.00402
o-Xylene		0.0113	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	0.0222	0.00200	0.0748	0.00201
Total Xylenes		0.0485	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	0.0479	0.00200	0.202	0.00201
Total BTEX		0.0630	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	0.0574	0.00200	0.252	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00		Feb-04-19 15:00	
	Analyzed:	Feb-04-19 20:19		Feb-04-19 20:25		Feb-04-19 20:31		Feb-04-19 20:50		Feb-04-19 20:37		Feb-04-19 20:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		39.2	4.98	293	4.97	1030	5.00	664	5.00	1520	25.0	1930	24.8
TPH by SW8015 Mod	***Extracted:***	Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00		Feb-04-19 11:00	
	Analyzed:	Feb-04-19 16:02		Feb-04-19 16:22		Feb-04-19 16:42		Feb-04-19 17:02		Feb-04-19 17:21		Feb-04-19 18:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		17.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	15.6	15.0	52.5	15.0
Diesel Range Organics (DRO)		265	14.9	<15.0	15.0	31.2	15.0	18.8	15.0	157	15.0	476	15.0
Motor Oil Range Hydrocarbons (MRO)		44.8	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	22.8	15.0	88.7	15.0
Total TPH		328	14.9	<15.0	15.0	31.2	15.0	18.8	15.0	195	15.0	617	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613312

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Mon Feb-04-19 08:00 am
Report Date: 05-FEB-19
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	613312-007						
	Field Id:	SW06						
	Depth:	0-2.5 ft						
	Matrix:	SOIL						
	Sampled:	Jan-31-19 12:50						
BTEX by EPA 8021B	***Extracted:***	Feb-04-19 11:00						
	Analyzed:	Feb-04-19 21:13						
	Units/RL:	mg/kg	RL					
Benzene		0.0204	0.00202					
Toluene		0.316	0.00202					
Ethylbenzene		0.0859	0.00202					
m,p-Xylenes		0.457	0.00403					
o-Xylene		0.183	0.00202					
Total Xylenes		0.640	0.00202					
Total BTEX		1.06	0.00202					
Inorganic Anions by EPA 300	***Extracted:***	Feb-04-19 15:00						
	Analyzed:	Feb-04-19 21:08						
	Units/RL:	mg/kg	RL					
Chloride		5700	49.7					
TPH by SW8015 Mod	***Extracted:***	Feb-04-19 11:00						
	Analyzed:	Feb-04-19 18:40						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		392	15.0					
Diesel Range Organics (DRO)		1160	15.0					
Motor Oil Range Hydrocarbons (MRO)		184	15.0					
Total TPH		1740	15.0					

Jessica Kramer
Project Assistant

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-001	Date Collected:	01.31.19 11.50	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.2**	4.98	mg/kg	02.04.19 20.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.9**	14.9	mg/kg	02.04.19 16.02		1
Diesel Range Organics (DRO)	C10C28DRO	**265**	14.9	mg/kg	02.04.19 16.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**44.8**	14.9	mg/kg	02.04.19 16.02		1
Total TPH	PHC635	**328**	14.9	mg/kg	02.04.19 16.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.04.19 16.02	
o-Terphenyl	84-15-1	97	%	70-135	02.04.19 16.02	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-001	Date Collected:	01.31.19 11.50	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.04.19 19.26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.04.19 19.26	U	1
Ethylbenzene	100-41-4	**0.0145**	0.00201	mg/kg	02.04.19 19.26		1
m,p-Xylenes	179601-23-1	**0.0372**	0.00402	mg/kg	02.04.19 19.26		1
o-Xylene	95-47-6	**0.0113**	0.00201	mg/kg	02.04.19 19.26		1
Total Xylenes	1330-20-7	**0.0485**	0.00201	mg/kg	02.04.19 19.26		1
Total BTEX		**0.0630**	0.00201	mg/kg	02.04.19 19.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	163	%	70-130	02.04.19 19.26	**
1,4-Difluorobenzene	540-36-3	124	%	70-130	02.04.19 19.26	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-002	Date Collected:	01.31.19 12.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**293**	4.97	mg/kg	02.04.19 20.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 16.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.04.19 16.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 16.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.04.19 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	02.04.19 16.22	
o-Terphenyl	84-15-1	87	%	70-135	02.04.19 16.22	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-002	Date Collected:	01.31.19 12.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.04.19 19.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.04.19 19.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.04.19 19.48	
1,4-Difluorobenzene	540-36-3	93	%	70-130	02.04.19 19.48	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-003	Date Collected:	01.31.19 12.15	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	5.00	mg/kg	02.04.19 20.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 16.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**31.2**	15.0	mg/kg	02.04.19 16.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 16.42	U	1
Total TPH	PHC635	**31.2**	15.0	mg/kg	02.04.19 16.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.04.19 16.42	
o-Terphenyl	84-15-1	102	%	70-135	02.04.19 16.42	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-003	Date Collected:	01.31.19 12.15	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.04.19 20.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.04.19 20.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	02.04.19 20.09	
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.04.19 20.09	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-004	Date Collected:	01.31.19 12.30	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**664**	5.00	mg/kg	02.04.19 20.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.04.19 17.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.8**	15.0	mg/kg	02.04.19 17.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.04.19 17.02	U	1
Total TPH	PHC635	**18.8**	15.0	mg/kg	02.04.19 17.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.04.19 17.02	
o-Terphenyl	84-15-1	91	%	70-135	02.04.19 17.02	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-004	Date Collected:	01.31.19 12.30	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.04.19 20.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.04.19 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.04.19 20.31	
1,4-Difluorobenzene	540-36-3	83	%	70-130	02.04.19 20.31	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-005	Date Collected:	01.31.19 12.35	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1520**	25.0	mg/kg	02.04.19 20.37		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.6**	15.0	mg/kg	02.04.19 17.21		1
Diesel Range Organics (DRO)	C10C28DRO	**157**	15.0	mg/kg	02.04.19 17.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**22.8**	15.0	mg/kg	02.04.19 17.21		1
Total TPH	PHC635	**195**	15.0	mg/kg	02.04.19 17.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.04.19 17.21	
o-Terphenyl	84-15-1	95	%	70-135	02.04.19 17.21	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-005	Date Collected:	01.31.19 12.35	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.04.19 20.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.04.19 20.52	U	1
Ethylbenzene	100-41-4	**0.00945**	0.00200	mg/kg	02.04.19 20.52		1
m,p-Xylenes	179601-23-1	**0.0257**	0.00400	mg/kg	02.04.19 20.52		1
o-Xylene	95-47-6	**0.0222**	0.00200	mg/kg	02.04.19 20.52		1
Total Xylenes	1330-20-7	**0.0479**	0.00200	mg/kg	02.04.19 20.52		1
Total BTEX		**0.0574**	0.00200	mg/kg	02.04.19 20.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	142	%	70-130	02.04.19 20.52	**
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.04.19 20.52	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-006	Date Collected:	01.31.19 12.45	Sample Depth:	0 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1930**	24.8	mg/kg	02.04.19 20.44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**52.5**	15.0	mg/kg	02.04.19 18.20		1
Diesel Range Organics (DRO)	C10C28DRO	**476**	15.0	mg/kg	02.04.19 18.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**88.7**	15.0	mg/kg	02.04.19 18.20		1
Total TPH	PHC635	**617**	15.0	mg/kg	02.04.19 18.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.04.19 18.20	
o-Terphenyl	84-15-1	105	%	70-135	02.04.19 18.20	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-006	Date Collected:	01.31.19 12.45	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.04.19 21.35	U	1
Toluene	108-88-3	**0.00595**	0.00201	mg/kg	02.04.19 21.35		1
Ethylbenzene	100-41-4	**0.0439**	0.00201	mg/kg	02.04.19 21.35		1
m,p-Xylenes	179601-23-1	**0.127**	0.00402	mg/kg	02.04.19 21.35		1
o-Xylene	95-47-6	**0.0748**	0.00201	mg/kg	02.04.19 21.35		1
Total Xylenes	1330-20-7	**0.202**	0.00201	mg/kg	02.04.19 21.35		1
Total BTEX		**0.252**	0.00201	mg/kg	02.04.19 21.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	127	%	70-130	02.04.19 21.35	
4-Bromofluorobenzene	460-00-4	215	%	70-130	02.04.19 21.35	**

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-007	Date Collected:	01.31.19 12.50	Sample Depth:	0 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.04.19 15.00	Basis:	Wet Weight
Seq Number:	3078004				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5700**	49.7	mg/kg	02.04.19 21.08		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078102				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**392**	15.0	mg/kg	02.04.19 18.40		1
Diesel Range Organics (DRO)	C10C28DRO	**1160**	15.0	mg/kg	02.04.19 18.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**184**	15.0	mg/kg	02.04.19 18.40		1
Total TPH	PHC635	**1740**	15.0	mg/kg	02.04.19 18.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.04.19 18.40	
o-Terphenyl	84-15-1	118	%	70-135	02.04.19 18.40	

Certificate of Analytical Results 613312

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	02.04.19 08.00
Lab Sample Id:	613312-007	Date Collected:	01.31.19 12.50	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.04.19 11.00	Basis:	Wet Weight
Seq Number:	3078044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0204**	0.00202	mg/kg	02.04.19 21.13		1
Toluene	108-88-3	**0.316**	0.00202	mg/kg	02.04.19 21.13		1
Ethylbenzene	100-41-4	**0.0859**	0.00202	mg/kg	02.04.19 21.13		1
m,p-Xylenes	179601-23-1	**0.457**	0.00403	mg/kg	02.04.19 21.13		1
o-Xylene	95-47-6	**0.183**	0.00202	mg/kg	02.04.19 21.13		1
Total Xylenes	1330-20-7	**0.640**	0.00202	mg/kg	02.04.19 21.13		1
Total BTEX		**1.06**	0.00202	mg/kg	02.04.19 21.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	02.04.19 21.13	
1,4-Difluorobenzene	540-36-3	91	%	70-130	02.04.19 21.13	

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 613312

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078004 Matrix: Solid Date Prep: 02.04.19
MB Sample Id: 7671027-1-BLK LCS Sample Id: 7671027-1-BKS LCSD Sample Id: 7671027-1-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	256	102	262	105	90-110	2	20	mg/kg	02.04.19 19:08	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078004 Matrix: Soil Date Prep: 02.04.19
Parent Sample Id: 613311-001 MS Sample Id: 613311-001 S MSD Sample Id: 613311-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	278	249	513	94	531	102	90-110	3	20	mg/kg	02.04.19 19:26	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078004 Matrix: Soil Date Prep: 02.04.19
Parent Sample Id: 613312-004 MS Sample Id: 613312-004 S MSD Sample Id: 613312-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	664	250	943	112	927	105	90-110	2	20	mg/kg	02.04.19 20:56	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078102 Matrix: Solid Date Prep: 02.04.19
MB Sample Id: 7671081-1-BLK LCS Sample Id: 7671081-1-BKS LCSD Sample Id: 7671081-1-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	826	83	951	95	70-135	14	20	mg/kg	02.04.19 13:04	
Diesel Range Organics (DRO)	<8.13	1000	918	92	1070	107	70-135	15	20	mg/kg	02.04.19 13:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		119		125		70-135	%	02.04.19 13:04
o-Terphenyl	104		115		127		70-135	%	02.04.19 13:04

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 613312

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078102 Matrix: Soil Date Prep: 02.04.19
Parent Sample Id: 613311-001 MS Sample Id: 613311-001 S MSD Sample Id: 613311-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.6	999	827	81	849	84	70-135	3	20	mg/kg	02.04.19 14:03	
Diesel Range Organics (DRO)	<8.12	999	867	87	885	89	70-135	2	20	mg/kg	02.04.19 14:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		115		70-135	%	02.04.19 14:03
o-Terphenyl	110		111		70-135	%	02.04.19 14:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078044 Matrix: Solid Date Prep: 02.04.19
MB Sample Id: 7671062-1-BLK LCS Sample Id: 7671062-1-BKS LCSD Sample Id: 7671062-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.107	107	0.111	111	70-130	4	35	mg/kg	02.04.19 09:33	
Toluene	<0.00199	0.0996	0.0879	88	0.0880	88	70-130	0	35	mg/kg	02.04.19 09:33	
Ethylbenzene	<0.00199	0.0996	0.101	101	0.108	108	70-130	7	35	mg/kg	02.04.19 09:33	
m,p-Xylenes	<0.00398	0.199	0.201	101	0.223	112	70-130	10	35	mg/kg	02.04.19 09:33	
o-Xylene	<0.00199	0.0996	0.0886	89	0.0964	96	70-130	8	35	mg/kg	02.04.19 09:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		109		112		70-130	%	02.04.19 09:33
4-Bromofluorobenzene	93		99		107		70-130	%	02.04.19 09:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078044 Matrix: Soil Date Prep: 02.04.19
Parent Sample Id: 613340-001 MS Sample Id: 613340-001 S MSD Sample Id: 613340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0676	68	0.0744	75	70-130	10	35	mg/kg	02.04.19 12:39	X
Toluene	<0.00199	0.0994	0.0546	55	0.0622	62	70-130	13	35	mg/kg	02.04.19 12:39	X
Ethylbenzene	<0.00199	0.0994	0.0672	68	0.0762	76	70-130	13	35	mg/kg	02.04.19 12:39	X
m,p-Xylenes	<0.00398	0.199	0.130	65	0.141	71	70-130	8	35	mg/kg	02.04.19 12:39	X
o-Xylene	<0.00199	0.0994	0.0588	59	0.0676	68	70-130	14	35	mg/kg	02.04.19 12:39	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	127		119		70-130	%	02.04.19 12:39
4-Bromofluorobenzene	98		103		70-130	%	02.04.19 12:39

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

Work Order No: 613312

XENCO LABORATORIES

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

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Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
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City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178 & 575 200 6754	Email:	abaker@ltenv.com & abyers@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ rownfields ☐ C ☐ perfund ☐
State of Project:
Reporting: Level II ☐ evel III ☐ ST/UST ☐ RP ☐ vel IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	012918193	Routine	☐
P.O. Number:	2RP 5102	Rush:	same day
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.1/2.0	Thermometer ID	R8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS05	S	1/31	11:50	2.5'	1	X	X	X
FS06	S		12:00	2.5'	1	X	X	X
FS07	S		12:15	2.5'	1	X	X	X
FS08	S		12:30	2.5'	1	X	X	X
FS09	S		12:35	2.5'	1	X	X	X
SW05	S		12:45	0-2.5'	1	X	X	X
SW06	S	↓	12:50	0-2.5'	1	X	X	X

Orb 02/01/19

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Brent Rose	2/1/19 @ 13:30	2		2/1/19 @ 1350
3		Zeeteh	2/4/19 0800	4		
5				6		

Revised Date 051418 Rev. 2018.1

7743 7545 7990

Final 1.000

Page 24 of 26

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: 02/04/2019 08:00:00 AM

Work Order #: 613312

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 02/04/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/04/2019

Jessica Kramer

Analytical Report 614002

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

12-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)
Xenco-Lakeland: Florida (E84098)

12-FEB-19

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

Reference: XENCO Report No(s): **614002**
PLU 420 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) 614002. 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. 614002 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 614002

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH11	S	02-05-19 16:10	4 ft	614002-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078719 BTEX by EPA 8021B

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

Certificate of Analysis Summary 614002

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 12-FEB-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	614002-001					
	Field Id:	PH11					
	Depth:	4- ft					
	Matrix:	SOIL					
	Sampled:	Feb-05-19 16:10					
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 15:00					
	Analyzed:	Feb-11-19 11:24					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 13:00					
	Analyzed:	Feb-08-19 18:49					
	Units/RL:	mg/kg	RL				
Chloride		118	4.95				
TPH by SW8015 Mod	***Extracted:***	Feb-08-19 16:00					
	Analyzed:	Feb-08-19 22:14					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 614002

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614002-001	Date Collected:	02.05.19 16.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**118**	4.95	mg/kg	02.08.19 18.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.08.19 22.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.08.19 22.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.08.19 22.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.08.19 22.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.08.19 22.14	
o-Terphenyl	84-15-1	103	%	70-135	02.08.19 22.14	

Certificate of Analytical Results 614002

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614002-001	Date Collected:	02.05.19 16.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.11.19 11.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 11.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.11.19 11.24	
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.11.19 11.24	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 614002

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671458-1-BLK LCS Sample Id: 7671458-1-BKS LCSD Sample Id: 7671458-1-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	230	92	233	93	90-110	1	20	mg/kg	02.08.19 17:26	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614001-001 MS Sample Id: 614001-001 S MSD Sample Id: 614001-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	486	252	716	91	714	90	90-110	0	20	mg/kg	02.08.19 17:45	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614003-004 MS Sample Id: 614003-004 S MSD Sample Id: 614003-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.2	250	273	95	291	102	90-110	6	20	mg/kg	02.08.19 19:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671417-1-BLK LCS Sample Id: 7671417-1-BKS LCSD Sample Id: 7671417-1-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	936	94	891	89	70-135	5	20	mg/kg	02.08.19 21:33	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	966	97	70-135	10	20	mg/kg	02.08.19 21:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		129		130		70-135	%	02.08.19 21:33
o-Terphenyl	100		122		123		70-135	%	02.08.19 21:33

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 614002

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614002-001 MS Sample Id: 614002-001 S MSD Sample Id: 614002-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.9	997	913	90	817	80	70-135	11	20	mg/kg	02.08.19 22:34	
Diesel Range Organics (DRO)	<8.10	997	1010	101	889	89	70-135	13	20	mg/kg	02.08.19 22:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		123		70-135	%	02.08.19 22:34
o-Terphenyl	126		117		70-135	%	02.08.19 22:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078719 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671479-1-BLK LCS Sample Id: 7671479-1-BKS LCSD Sample Id: 7671479-1-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	0.119	119	0.117	116	70-130	2	35	mg/kg	02.11.19 09:17	
Toluene	<0.00200	0.0998	0.102	102	0.0998	99	70-130	2	35	mg/kg	02.11.19 09:17	
Ethylbenzene	<0.00200	0.0998	0.124	124	0.123	122	70-130	1	35	mg/kg	02.11.19 09:17	
m,p-Xylenes	<0.00399	0.200	0.244	122	0.243	121	70-130	0	35	mg/kg	02.11.19 09:17	
o-Xylene	<0.00200	0.0998	0.116	116	0.115	114	70-130	1	35	mg/kg	02.11.19 09:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		116		126		70-130	%	02.11.19 09:17
4-Bromofluorobenzene	84		96		87		70-130	%	02.11.19 09:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078719 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614002-001 MS Sample Id: 614002-001 S MSD Sample Id: 614002-001 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	0.0970	97	0.0868	87	70-130	11	35	mg/kg	02.11.19 09:59	
Toluene	<0.00200	0.100	0.0853	85	0.0778	78	70-130	9	35	mg/kg	02.11.19 09:59	
Ethylbenzene	<0.00200	0.100	0.0878	88	0.0803	81	70-130	9	35	mg/kg	02.11.19 09:59	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.147	74	70-130	12	35	mg/kg	02.11.19 09:59	
o-Xylene	<0.00200	0.100	0.0789	79	0.0731	74	70-130	8	35	mg/kg	02.11.19 09:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		107		70-130	%	02.11.19 09:59
4-Bromofluorobenzene	89		90		70-130	%	02.11.19 09:59

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: 614002

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	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 ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	012918193	Routine ☐	
P.O. Number:	2RP5102	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6/3.5	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH11	S	2/5	16:10	4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

2-17-19

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

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

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		2/7/19 10:35	2		2/8/19 1245
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 11 of 12

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/08/2019 12:45:00 PM

Work Order #: 614002

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/08/2019

Checklist reviewed by: Jessica Kramer Date: 02/11/2019

Analytical Report 614003

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

18-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)

18-FEB-19

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

Reference: XENCO Report No(s): **614003**
PLU 420 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) 614003. 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. 614003 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS10	S	02-05-19 11:00	2.5 ft	614003-001
FS11	S	02-05-19 11:15	2.5 ft	614003-002
FS12	S	02-05-19 11:20	2.5 ft	614003-003
FS13	S	02-05-19 11:30	2.5 ft	614003-004
SW07	S	02-05-19 13:20	0 - 4 ft	614003-005
FS04A	S	02-05-19 13:30	4.5 ft	614003-006
PH12	S	02-05-19 11:45	4.5 ft	614003-007
SW08	S	02-05-19 14:00	0 - 2.5 ft	614003-008
SW09	S	02-05-19 14:10	0 - 3 ft	614003-009
SW10	S	02-06-19 14:40	0 - 2.5 ft	614003-010
SW11	S	02-06-19 14:45	0 - 2 ft	614003-011
FS14	S	02-06-19 14:30	1 - 2.5 ft	614003-012
FS15	S	02-06-19 14:35	1 - 2.5 ft	614003-013

Sample receipt non conformances and comments:

PER CLIENTS EMAIL, CORRECTED SAMPLE NAMES. NEW VERSION GENERATED. JK 02/18/19
FS21 - FS14
FS22 - FS15

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078596 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 614003-009,614003-012,614003-011,614003-010.

Batch: LBA-3078639 Inorganic Anions by EPA 300
Lab Sample ID 614003-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Nitrate as N Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 614003-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012

Outlier/s are due to possible matrix interference.

Batch: LBA-3078719 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 614003-004,614003-009,614003-011.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 614003

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 18-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	614003-001		614003-002		614003-003		614003-004		614003-005		614003-006	
	Field Id:	FS10		FS11		FS12		FS13		SW07		FS04A	
	Depth:	2.5- ft		2.5- ft		2.5- ft		2.5- ft		0-4 ft		4.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-05-19 11:00		Feb-05-19 11:15		Feb-05-19 11:20		Feb-05-19 11:30		Feb-05-19 13:20		Feb-05-19 13:30	
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00	
	Analyzed:	Feb-11-19 11:45		Feb-11-19 12:06		Feb-11-19 12:28		Feb-12-19 10:14		Feb-11-19 12:49		Feb-11-19 13:11	
	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	<0.00200	0.00200	<0.00200	0.00200	0.108	0.100	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	0.475	0.100	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	5.67	0.100	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00403	0.00403	<0.00399	0.00399	0.00517	0.00400	1.11	0.200	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	0.00288	0.00200	0.253	0.100	0.00428	0.00200	<0.00201	0.00201
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	0.00805	0.00200	1.36	0.100	0.00428	0.00200	<0.00201	0.00201
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	0.00805	0.00200	7.62	0.100	0.00428	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00	
	Analyzed:	Feb-08-19 18:56		Feb-08-19 19:02		Feb-08-19 19:27		Feb-08-19 19:08		Feb-08-19 19:33		Feb-08-19 19:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		362	4.95	1390	24.8	4640	24.8	35.2	5.00	771	5.00	10.9	5.00
TPH by SW8015 Mod	***Extracted:***	Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00	
	Analyzed:	Feb-08-19 23:14		Feb-08-19 23:34		Feb-08-19 23:55		Feb-09-19 00:15		Feb-09-19 00:35		Feb-09-19 00:55	
	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	31.4	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		15.4	15.0	17.0	14.9	52.4	15.0	171	15.0	197	15.0	62.9	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	18.7	15.0	39.6	15.0	<15.0	15.0
Total TPH		15.4	15.0	17.0	14.9	52.4	15.0	221	15.0	237	15.0	62.9	15.0

Certificate of Analysis Summary 614003

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 18-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	614003-007		614003-008		614003-009		614003-010		614003-011		614003-012	
	Field Id:	PH12		SW08		SW09		SW10		SW11		FS14	
	Depth:	4.5- ft		0-2.5 ft		0-3 ft		0-2.5 ft		0-2 ft		1-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-05-19 11:45		Feb-05-19 14:00		Feb-05-19 14:10		Feb-06-19 14:40		Feb-06-19 14:45		Feb-06-19 14:30	
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00		Feb-08-19 15:00	
	Analyzed:	Feb-11-19 13:32		Feb-11-19 13:54		Feb-11-19 18:11		Feb-12-19 10:35		Feb-12-19 10:56		Feb-12-19 09:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	0.0653	0.0199	0.152	0.0998	0.467	0.101	0.243	0.0400
Toluene		<0.00200	0.00200	<0.00200	0.00200	0.656	0.0199	5.92	0.0998	14.8	0.101	5.70	0.0400
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	0.615	0.0199	5.28	0.0998	10.3	0.101	3.68	0.0400
m,p-Xylenes		<0.00400	0.00400	<0.00401	0.00401	2.85	0.0398	20.3	0.200	36.9	0.201	13.6	0.0800
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	1.06	0.0199	8.42	0.0998	15.8	0.101	6.40	0.0400
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	3.91	0.0199	28.7	0.0998	52.7	0.101	20.0	0.0400
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	5.25	0.0199	40.1	0.0998	78.3	0.101	29.6	0.0400
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00		Feb-08-19 13:00	
	Analyzed:	Feb-08-19 20:00		Feb-08-19 20:07		Feb-08-19 20:13		Feb-08-19 20:19		Feb-08-19 20:25		Feb-08-19 20:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		877	5.00	818	5.00	5650	50.0	5120	49.7	5140	49.8	15600	100
TPH by SW8015 Mod	***Extracted:***	Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00	
	Analyzed:	Feb-09-19 01:16		Feb-09-19 01:36		Feb-09-19 01:56		Feb-09-19 02:57		Feb-09-19 03:17		Feb-09-19 03:37	
	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	822	15.0	2350	74.8	2170	74.7	1420	15.0
Diesel Range Organics (DRO)		<15.0	15.0	60.2	15.0	3480	15.0	8190	74.8	6970	74.7	4280	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	449	15.0	1100	74.8	994	74.7	487	15.0
Total TPH		<15.0	15.0	60.2	15.0	4750	15.0	11600	74.8	10100	74.7	6190	15.0

Certificate of Analysis Summary 614003

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 18-FEB-19
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	614003-013						
	Field Id:	FS15						
	Depth:	1-2.5 ft						
	Matrix:	SOIL						
	Sampled:	Feb-06-19 14:35						
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 15:00						
	Analyzed:	Feb-12-19 11:18						
	Units/RL:	mg/kg	RL					
Benzene		0.140	0.101					
Toluene		1.89	0.101					
Ethylbenzene		5.11	0.101					
m,p-Xylenes		5.02	0.202					
o-Xylene		2.66	0.101					
Total Xylenes		7.68	0.101					
Total BTEX		14.8	0.101					
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 14:00						
	Analyzed:	Feb-08-19 21:30						
	Units/RL:	mg/kg	RL					
Chloride		9730	50.0					
TPH by SW8015 Mod	***Extracted:***	Feb-08-19 16:00						
	Analyzed:	Feb-09-19 03:58						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		403	15.0					
Diesel Range Organics (DRO)		1550	15.0					
Motor Oil Range Hydrocarbons (MRO)		214	15.0					
Total TPH		2170	15.0					

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-001	Date Collected:	02.05.19 11.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**362**	4.95	mg/kg	02.08.19 18.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.08.19 23.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**15.4**	15.0	mg/kg	02.08.19 23.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.08.19 23.14	U	1
Total TPH	PHC635	**15.4**	15.0	mg/kg	02.08.19 23.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.08.19 23.14	
o-Terphenyl	84-15-1	109	%	70-135	02.08.19 23.14	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-001	Date Collected:	02.05.19 11.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.11.19 11.45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.11.19 11.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.11.19 11.45	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.11.19 11.45	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-002	Date Collected:	02.05.19 11.15	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1390**	24.8	mg/kg	02.08.19 19.02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.08.19 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.0**	14.9	mg/kg	02.08.19 23.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.08.19 23.34	U	1
Total TPH	PHC635	**17.0**	14.9	mg/kg	02.08.19 23.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.08.19 23.34	
o-Terphenyl	84-15-1	107	%	70-135	02.08.19 23.34	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-002	Date Collected:	02.05.19 11.15	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.11.19 12.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.11.19 12.06	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.11.19 12.06	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-003	Date Collected:	02.05.19 11.20	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4640**	24.8	mg/kg	02.08.19 19.27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.08.19 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**52.4**	15.0	mg/kg	02.08.19 23.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.08.19 23.55	U	1
Total TPH	PHC635	**52.4**	15.0	mg/kg	02.08.19 23.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.08.19 23.55	
o-Terphenyl	84-15-1	104	%	70-135	02.08.19 23.55	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-003	Date Collected:	02.05.19 11.20	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 12.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 12.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 12.28	U	1
m,p-Xylenes	179601-23-1	**0.00517**	0.00400	mg/kg	02.11.19 12.28		1
o-Xylene	95-47-6	**0.00288**	0.00200	mg/kg	02.11.19 12.28		1
Total Xylenes	1330-20-7	**0.00805**	0.00200	mg/kg	02.11.19 12.28		1
Total BTEX		**0.00805**	0.00200	mg/kg	02.11.19 12.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.11.19 12.28	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.11.19 12.28	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-004	Date Collected:	02.05.19 11.30	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.2**	5.00	mg/kg	02.08.19 19.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**31.4**	15.0	mg/kg	02.09.19 00.15		1
Diesel Range Organics (DRO)	C10C28DRO	**171**	15.0	mg/kg	02.09.19 00.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.7**	15.0	mg/kg	02.09.19 00.15		1
Total TPH	PHC635	**221**	15.0	mg/kg	02.09.19 00.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.09.19 00.15	
o-Terphenyl	84-15-1	108	%	70-135	02.09.19 00.15	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-004	Date Collected:	02.05.19 11.30	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.108**	0.100	mg/kg	02.12.19 10.14		50
Toluene	108-88-3	**0.475**	0.100	mg/kg	02.12.19 10.14		50
Ethylbenzene	100-41-4	**5.67**	0.100	mg/kg	02.12.19 10.14		50
m,p-Xylenes	179601-23-1	**1.11**	0.200	mg/kg	02.12.19 10.14		50
o-Xylene	95-47-6	**0.253**	0.100	mg/kg	02.12.19 10.14		50
Total Xylenes	1330-20-7	**1.36**	0.100	mg/kg	02.12.19 10.14		50
Total BTEX		**7.62**	0.100	mg/kg	02.12.19 10.14		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	74	%	70-130	02.12.19 10.14	
4-Bromofluorobenzene	460-00-4	136	%	70-130	02.12.19 10.14	**

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-005	Date Collected:	02.05.19 13.20	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**771**	5.00	mg/kg	02.08.19 19.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 00.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**197**	15.0	mg/kg	02.09.19 00.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**39.6**	15.0	mg/kg	02.09.19 00.35		1
Total TPH	PHC635	**237**	15.0	mg/kg	02.09.19 00.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.09.19 00.35	
o-Terphenyl	84-15-1	114	%	70-135	02.09.19 00.35	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-005	Date Collected:	02.05.19 13.20	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 12.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 12.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 12.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.11.19 12.49	U	1
o-Xylene	95-47-6	**0.00428**	0.00200	mg/kg	02.11.19 12.49		1
Total Xylenes	1330-20-7	**0.00428**	0.00200	mg/kg	02.11.19 12.49		1
Total BTEX		**0.00428**	0.00200	mg/kg	02.11.19 12.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	02.11.19 12.49	
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.11.19 12.49	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-006	Date Collected:	02.05.19 13.30	Sample Depth:	4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.9**	5.00	mg/kg	02.08.19 19.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 00.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**62.9**	15.0	mg/kg	02.09.19 00.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.09.19 00.55	U	1
Total TPH	PHC635	**62.9**	15.0	mg/kg	02.09.19 00.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.09.19 00.55	
o-Terphenyl	84-15-1	97	%	70-135	02.09.19 00.55	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-006	Date Collected:	02.05.19 13.30	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.11.19 13.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.11.19 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.11.19 13.11	
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.11.19 13.11	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-007	Date Collected:	02.05.19 11.45	Sample Depth:	4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**877**	5.00	mg/kg	02.08.19 20.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 01.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.09.19 01.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.09.19 01.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.09.19 01.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.09.19 01.16	
o-Terphenyl	84-15-1	97	%	70-135	02.09.19 01.16	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-007	Date Collected:	02.05.19 11.45	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.11.19 13.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 13.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.11.19 13.32	
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.11.19 13.32	

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-008	Date Collected:	02.05.19 14.00	Sample Depth:	0 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**818**	5.00	mg/kg	02.08.19 20.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**60.2**	15.0	mg/kg	02.09.19 01.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.09.19 01.36	U	1
Total TPH	PHC635	**60.2**	15.0	mg/kg	02.09.19 01.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.09.19 01.36	
o-Terphenyl	84-15-1	99	%	70-135	02.09.19 01.36	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-008	Date Collected:	02.05.19 14.00	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.11.19 13.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	02.11.19 13.54	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.11.19 13.54	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-009	Date Collected:	02.05.19 14.10	Sample Depth:	0 - 3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5650**	50.0	mg/kg	02.08.19 20.13		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**822**	15.0	mg/kg	02.09.19 01.56		1
Diesel Range Organics (DRO)	C10C28DRO	**3480**	15.0	mg/kg	02.09.19 01.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**449**	15.0	mg/kg	02.09.19 01.56		1
Total TPH	PHC635	**4750**	15.0	mg/kg	02.09.19 01.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	02.09.19 01.56	
o-Terphenyl	84-15-1	149	%	70-135	02.09.19 01.56	**

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-009	Date Collected:	02.05.19 14.10	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0653**	0.0199	mg/kg	02.11.19 18.11		10
Toluene	108-88-3	**0.656**	0.0199	mg/kg	02.11.19 18.11		10
Ethylbenzene	100-41-4	**0.615**	0.0199	mg/kg	02.11.19 18.11		10
m,p-Xylenes	179601-23-1	**2.85**	0.0398	mg/kg	02.11.19 18.11		10
o-Xylene	95-47-6	**1.06**	0.0199	mg/kg	02.11.19 18.11		10
Total Xylenes	1330-20-7	**3.91**	0.0199	mg/kg	02.11.19 18.11		10
Total BTEX		**5.25**	0.0199	mg/kg	02.11.19 18.11		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	143	%	70-130	02.11.19 18.11	**
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.11.19 18.11	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-010	Date Collected:	02.06.19 14.40	Sample Depth:	0 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5120**	49.7	mg/kg	02.08.19 20.19		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2350**	74.8	mg/kg	02.09.19 02.57		5
Diesel Range Organics (DRO)	C10C28DRO	**8190**	74.8	mg/kg	02.09.19 02.57		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1100**	74.8	mg/kg	02.09.19 02.57		5
Total TPH	PHC635	**11600**	74.8	mg/kg	02.09.19 02.57		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	02.09.19 02.57	
o-Terphenyl	84-15-1	206	%	70-135	02.09.19 02.57	**

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-010	Date Collected:	02.06.19 14.40	Sample Depth:	0 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.152**	0.0998	mg/kg	02.12.19 10.35		50
Toluene	108-88-3	**5.92**	0.0998	mg/kg	02.12.19 10.35		50
Ethylbenzene	100-41-4	**5.28**	0.0998	mg/kg	02.12.19 10.35		50
m,p-Xylenes	179601-23-1	**20.3**	0.200	mg/kg	02.12.19 10.35		50
o-Xylene	95-47-6	**8.42**	0.0998	mg/kg	02.12.19 10.35		50
Total Xylenes	1330-20-7	**28.7**	0.0998	mg/kg	02.12.19 10.35		50
Total BTEX		**40.1**	0.0998	mg/kg	02.12.19 10.35		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80	%	70-130	02.12.19 10.35	
4-Bromofluorobenzene	460-00-4	117	%	70-130	02.12.19 10.35	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-011	Date Collected:	02.06.19 14.45	Sample Depth:	0 - 2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5140**	49.8	mg/kg	02.08.19 20.25		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2170**	74.7	mg/kg	02.09.19 03.17		5
Diesel Range Organics (DRO)	C10C28DRO	**6970**	74.7	mg/kg	02.09.19 03.17		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**994**	74.7	mg/kg	02.09.19 03.17		5
Total TPH	PHC635	**10100**	74.7	mg/kg	02.09.19 03.17		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.09.19 03.17	
o-Terphenyl	84-15-1	205	%	70-135	02.09.19 03.17	**

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-011	Date Collected:	02.06.19 14.45	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.467**	0.101	mg/kg	02.12.19 10.56		50
Toluene	108-88-3	**14.8**	0.101	mg/kg	02.12.19 10.56		50
Ethylbenzene	100-41-4	**10.3**	0.101	mg/kg	02.12.19 10.56		50
m,p-Xylenes	179601-23-1	**36.9**	0.201	mg/kg	02.12.19 10.56		50
o-Xylene	95-47-6	**15.8**	0.101	mg/kg	02.12.19 10.56		50
Total Xylenes	1330-20-7	**52.7**	0.101	mg/kg	02.12.19 10.56		50
Total BTEX		**78.3**	0.101	mg/kg	02.12.19 10.56		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.12.19 10.56	
4-Bromofluorobenzene	460-00-4	231	%	70-130	02.12.19 10.56	**

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-012	Date Collected:	02.06.19 14.30	Sample Depth:	1 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 13.00	Basis:	Wet Weight
Seq Number:	3078639				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15600**	100	mg/kg	02.08.19 20.31		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1420**	15.0	mg/kg	02.09.19 03.37		1
Diesel Range Organics (DRO)	C10C28DRO	**4280**	15.0	mg/kg	02.09.19 03.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**487**	15.0	mg/kg	02.09.19 03.37		1
Total TPH	PHC635	**6190**	15.0	mg/kg	02.09.19 03.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	02.09.19 03.37	
o-Terphenyl	84-15-1	180	%	70-135	02.09.19 03.37	**

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-012	Date Collected:	02.06.19 14.30	Sample Depth:	1 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.243**	0.0400	mg/kg	02.12.19 09.53		20
Toluene	108-88-3	**5.70**	0.0400	mg/kg	02.12.19 09.53		20
Ethylbenzene	100-41-4	**3.68**	0.0400	mg/kg	02.12.19 09.53		20
m,p-Xylenes	179601-23-1	**13.6**	0.0800	mg/kg	02.12.19 09.53		20
o-Xylene	95-47-6	**6.40**	0.0400	mg/kg	02.12.19 09.53		20
Total Xylenes	1330-20-7	**20.0**	0.0400	mg/kg	02.12.19 09.53		20
Total BTEX		**29.6**	0.0400	mg/kg	02.12.19 09.53		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	79	%	70-130	02.12.19 09.53	
4-Bromofluorobenzene	460-00-4	125	%	70-130	02.12.19 09.53	

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-013	Date Collected:	02.06.19 14.35	Sample Depth:	1 - 2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9730**	50.0	mg/kg	02.08.19 21.30		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**403**	15.0	mg/kg	02.09.19 03.58		1
Diesel Range Organics (DRO)	C10C28DRO	**1550**	15.0	mg/kg	02.09.19 03.58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**214**	15.0	mg/kg	02.09.19 03.58		1
Total TPH	PHC635	**2170**	15.0	mg/kg	02.09.19 03.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	02.09.19 03.58	
o-Terphenyl	84-15-1	129	%	70-135	02.09.19 03.58	

Certificate of Analytical Results 614003

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614003-013	Date Collected:	02.06.19 14.35	Sample Depth:	1 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 15.00	Basis:	Wet Weight
Seq Number:	3078719				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.140**	0.101	mg/kg	02.12.19 11.18		50
Toluene	108-88-3	**1.89**	0.101	mg/kg	02.12.19 11.18		50
Ethylbenzene	100-41-4	**5.11**	0.101	mg/kg	02.12.19 11.18		50
m,p-Xylenes	179601-23-1	**5.02**	0.202	mg/kg	02.12.19 11.18		50
o-Xylene	95-47-6	**2.66**	0.101	mg/kg	02.12.19 11.18		50
Total Xylenes	1330-20-7	**7.68**	0.101	mg/kg	02.12.19 11.18		50
Total BTEX		**14.8**	0.101	mg/kg	02.12.19 11.18		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	71	%	70-130	02.12.19 11.18	
4-Bromofluorobenzene	460-00-4	116	%	70-130	02.12.19 11.18	

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 614003

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671458-1-BLK LCS Sample Id: 7671458-1-BKS LCSD Sample Id: 7671458-1-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	230	92	233	93	90-110	1	20	mg/kg	02.08.19 17:26	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671460-1-BLK LCS Sample Id: 7671460-1-BKS LCSD Sample Id: 7671460-1-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	233	93	254	102	90-110	9	20	mg/kg	02.08.19 20:59	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614001-001 MS Sample Id: 614001-001 S MSD Sample Id: 614001-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	486	252	716	91	714	90	90-110	0	20	mg/kg	02.08.19 17:45	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078639 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614003-004 MS Sample Id: 614003-004 S MSD Sample Id: 614003-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.2	250	273	95	291	102	90-110	6	20	mg/kg	02.08.19 19:14	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614004-001 MS Sample Id: 614004-001 S MSD Sample Id: 614004-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	281	112	264	106	90-110	6	20	mg/kg	02.08.19 21:18	X

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

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

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

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

QC Summary 614003

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614004-010 MS Sample Id: 614004-010 S MSD Sample Id: 614004-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	250	409	102	403	99	90-110	1	20	mg/kg	02.08.19 22:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671417-1-BLK LCS Sample Id: 7671417-1-BKS LCSD Sample Id: 7671417-1-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	936	94	891	89	70-135	5	20	mg/kg	02.08.19 21:33	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	966	97	70-135	10	20	mg/kg	02.08.19 21:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		129		130		70-135	%	02.08.19 21:33
o-Terphenyl	100		122		123		70-135	%	02.08.19 21:33

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614002-001 MS Sample Id: 614002-001 S MSD Sample Id: 614002-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.9	997	913	90	817	80	70-135	11	20	mg/kg	02.08.19 22:34	
Diesel Range Organics (DRO)	<8.10	997	1010	101	889	89	70-135	13	20	mg/kg	02.08.19 22:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		123		70-135	%	02.08.19 22:34
o-Terphenyl	126		117		70-135	%	02.08.19 22:34

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 614003

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078719 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671479-1-BLK LCS Sample Id: 7671479-1-BKS LCSD Sample Id: 7671479-1-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	0.119	119	0.117	116	70-130	2	35	mg/kg	02.11.19 09:17	
Toluene	<0.00200	0.0998	0.102	102	0.0998	99	70-130	2	35	mg/kg	02.11.19 09:17	
Ethylbenzene	<0.00200	0.0998	0.124	124	0.123	122	70-130	1	35	mg/kg	02.11.19 09:17	
m,p-Xylenes	<0.00399	0.200	0.244	122	0.243	121	70-130	0	35	mg/kg	02.11.19 09:17	
o-Xylene	<0.00200	0.0998	0.116	116	0.115	114	70-130	1	35	mg/kg	02.11.19 09:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		116		126		70-130	%	02.11.19 09:17
4-Bromofluorobenzene	84		96		87		70-130	%	02.11.19 09:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078719 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614002-001 MS Sample Id: 614002-001 S MSD Sample Id: 614002-001 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	0.0970	97	0.0868	87	70-130	11	35	mg/kg	02.11.19 09:59	
Toluene	<0.00200	0.100	0.0853	85	0.0778	78	70-130	9	35	mg/kg	02.11.19 09:59	
Ethylbenzene	<0.00200	0.100	0.0878	88	0.0803	81	70-130	9	35	mg/kg	02.11.19 09:59	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.147	74	70-130	12	35	mg/kg	02.11.19 09:59	
o-Xylene	<0.00200	0.100	0.0789	79	0.0731	74	70-130	8	35	mg/kg	02.11.19 09:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		107		70-130	%	02.11.19 09:59
4-Bromofluorobenzene	89		90		70-130	%	02.11.19 09:59

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: 614003

XENCO LABORATORIES

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

www.xenco.com Page 1 of 2

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 ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	01291819 3	Routine ☐	
P.O. Number:	2RP5102	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6 3.5	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS10	S	2/5	11:00	2.5'	1	X	X	X
FS11	S	"	11:15	2.5'	1			
FS12	S		11:20	2.5'	1			
FS13	S		11:30	2.5'	1			
SW07	S		13:20	0-4'	1			
FS04A	S		13:30	4.5'	1			
~~FS14~~ PH12	S		11:45	4.5'	1			
SW08	S		14:00	0-2.5'	1			
SW09	S	↓	14:10	0-3'	1			
SW10	S	2/6	14:40	0-2.5'	1			

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Anna Byers		2/7/19 10:35	2		2/8/19 7:45
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

7744 2053 2356

Chain of Custody

Work Order No: 614003

XENCO LABORATORIES

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

www.xenco.com Page 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO 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 ☐ rownfields ☐ C ☐ perfund ☐
State of Project:
Reporting:Level II ☐ evel III ☐ ST/UST ☐ RP ☐ vel IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	012918193	Routine ☐	
P.O. Number:	2RP5102	Rush: Same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6 3.5	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW11	S	2/6	1445	0-2'	1	X	X	X
FS21	S	2/6	1430	1-2.5'	1	X	X	X
FS22	S	2/6	1435	1-2.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

2/6/19

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		2/7/19 10:35			
2						
3						
4						
5						
6						2/8/19 1245

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/08/2019 12:45:00 PM

Work Order #: 614003

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/08/2019

Checklist reviewed by: Jessica Kramer Date: 02/11/2019

Analytical Report 614004

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

12-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)
Xenco-Lakeland: Florida (E84098)

12-FEB-19

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

Reference: XENCO Report No(s): **614004**
PLU 420 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) 614004. 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. 614004 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH06	S	02-05-19 14:35	ft	614004-001
PH06A	S	02-05-19 14:45	1 ft	614004-002
PH07	S	02-05-19 14:50	ft	614004-003
PH07A	S	02-05-19 15:00	1 ft	614004-004
PH08	S	02-05-19 14:50	ft	614004-005
PH08A	S	02-05-19 14:52	1 ft	614004-006
PH09	S	02-05-19 15:45	ft	614004-007
PH09A	S	02-05-19 15:50	1 ft	614004-008
PH10	S	02-05-19 16:00	ft	614004-009
PH10A	S	02-05-19 16:05	1 ft	614004-010

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078643 Inorganic Anions by EPA 300
Lab Sample ID 614004-010 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: 614004-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3078779 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 614004

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 12-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	614004-001		614004-002		614004-003		614004-004		614004-005		614004-006	
	Field Id:	PH06		PH06A		PH07		PH07A		PH08		PH08A	
	Depth:			1- ft				1- ft				1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-05-19 14:35		Feb-05-19 14:45		Feb-05-19 14:50		Feb-05-19 15:00		Feb-05-19 14:50		Feb-05-19 14:52	
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00	
	Analyzed:	Feb-11-19 22:26		Feb-11-19 22:47		Feb-11-19 23:08		Feb-11-19 23:30		Feb-11-19 23:51		Feb-12-19 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00	
	Analyzed:	Feb-08-19 21:12		Feb-08-19 21:36		Feb-08-19 21:42		Feb-08-19 21:49		Feb-08-19 22:10		Feb-08-19 22:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	<5.00	5.00	138	5.00	188	5.03	6.72	4.97	<5.00	5.00
TPH by SW8015 Mod	***Extracted:***	Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00		Feb-08-19 16:00	
	Analyzed:	Feb-09-19 04:18		Feb-09-19 04:38		Feb-09-19 04:58		Feb-09-19 05:18		Feb-09-19 05:39		Feb-09-19 05:59	
	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	<14.9	14.9	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		39.8	15.0	<15.0	15.0	1070	15.0	243	14.9	<14.9	14.9	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		15.9	15.0	<15.0	15.0	417	15.0	105	14.9	<14.9	14.9	<15.0	15.0
Total TPH		55.7	15.0	<15.0	15.0	1490	15.0	348	14.9	<14.9	14.9	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 614004

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Feb-08-19 12:45 pm
Report Date: 12-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	614004-007		614004-008		614004-009		614004-010					
	Field Id:	PH09		PH09A		PH10		PH10A					
	Depth:			1- ft				1- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Feb-05-19 15:45		Feb-05-19 15:50		Feb-05-19 16:00		Feb-05-19 16:05					
BTEX by EPA 8021B	***Extracted:***	Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00		Feb-08-19 17:00					
	Analyzed:	Feb-12-19 00:34		Feb-12-19 00:56		Feb-12-19 01:17		Feb-12-19 01:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00403	0.00403	<0.00399	0.00399	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00		Feb-08-19 14:00					
	Analyzed:	Feb-08-19 22:23		Feb-08-19 22:29		Feb-08-19 22:35		Feb-08-19 22:41					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		206	4.96	1100	4.98	179	5.03	155	4.99				
TPH by SW8015 Mod	***Extracted:***	Feb-09-19 14:00		Feb-09-19 14:00		Feb-09-19 14:00		Feb-09-19 14:00					
	Analyzed:	Feb-10-19 02:42		Feb-10-19 03:42		Feb-10-19 04:02		Feb-10-19 04:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9				
Diesel Range Organics (DRO)		41.1	15.0	<15.0	15.0	79.9	15.0	101	14.9				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	16.6	15.0	20.0	14.9				
Total TPH		41.1	15.0	<15.0	15.0	96.5	15.0	121	14.9				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-001	Date Collected:	02.05.19 14.35		

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.08.19 21.12	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 04.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**39.8**	15.0	mg/kg	02.09.19 04.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**15.9**	15.0	mg/kg	02.09.19 04.18		1
Total TPH	PHC635	**55.7**	15.0	mg/kg	02.09.19 04.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	02.09.19 04.18	
o-Terphenyl	84-15-1	115	%	70-135	02.09.19 04.18	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-001	Date Collected:	02.05.19 14.35		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.11.19 22.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.11.19 22.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	02.11.19 22.26	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.11.19 22.26	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-002	Date Collected:	02.05.19 14.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.08.19 21.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 04.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.09.19 04.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.09.19 04.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.09.19 04.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.09.19 04.38	
o-Terphenyl	84-15-1	98	%	70-135	02.09.19 04.38	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-002	Date Collected:	02.05.19 14.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.11.19 22.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	02.11.19 22.47	
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.11.19 22.47	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-003	Date Collected:	02.05.19 14.50		

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**138**	5.00	mg/kg	02.08.19 21.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 04.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1070**	15.0	mg/kg	02.09.19 04.58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**417**	15.0	mg/kg	02.09.19 04.58		1
Total TPH	PHC635	**1490**	15.0	mg/kg	02.09.19 04.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.09.19 04.58	
o-Terphenyl	84-15-1	119	%	70-135	02.09.19 04.58	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-003	Date Collected:	02.05.19 14.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.11.19 23.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.11.19 23.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	02.11.19 23.08	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.11.19 23.08	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-004	Date Collected:	02.05.19 15.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**188**	5.03	mg/kg	02.08.19 21.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.09.19 05.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**243**	14.9	mg/kg	02.09.19 05.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**105**	14.9	mg/kg	02.09.19 05.18		1
Total TPH	PHC635	**348**	14.9	mg/kg	02.09.19 05.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	02.09.19 05.18	
o-Terphenyl	84-15-1	116	%	70-135	02.09.19 05.18	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-004	Date Collected:	02.05.19 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.11.19 23.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.11.19 23.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.11.19 23.30	
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.11.19 23.30	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-005	Date Collected:	02.05.19 14.50		

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.72**	4.97	mg/kg	02.08.19 22.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.09.19 05.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.09.19 05.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.09.19 05.39	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.09.19 05.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.09.19 05.39	
o-Terphenyl	84-15-1	91	%	70-135	02.09.19 05.39	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-005	Date Collected:	02.05.19 14.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.11.19 23.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.11.19 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.11.19 23.51	
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.11.19 23.51	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-006	Date Collected:	02.05.19 14.52	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.08.19 22.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.08.19 16.00	Basis:	Wet Weight
Seq Number:	3078596				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.09.19 05.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.09.19 05.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.09.19 05.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.09.19 05.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.09.19 05.59	
o-Terphenyl	84-15-1	96	%	70-135	02.09.19 05.59	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-006	Date Collected:	02.05.19 14.52	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.12.19 00.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.12.19 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.12.19 00.13	
4-Bromofluorobenzene	460-00-4	87	%	70-130	02.12.19 00.13	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-007	Date Collected:	02.05.19 15.45		

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**206**	4.96	mg/kg	02.08.19 22.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.09.19 14.00	Basis:	Wet Weight
Seq Number:	3078602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.10.19 02.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**41.1**	15.0	mg/kg	02.10.19 02.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.10.19 02.42	U	1
Total TPH	PHC635	**41.1**	15.0	mg/kg	02.10.19 02.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.10.19 02.42	
o-Terphenyl	84-15-1	95	%	70-135	02.10.19 02.42	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-007	Date Collected:	02.05.19 15.45		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.12.19 00.34	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.12.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.12.19 00.34	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.12.19 00.34	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-008	Date Collected:	02.05.19 15.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1100**	4.98	mg/kg	02.08.19 22.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.09.19 14.00	Basis:	Wet Weight
Seq Number:	3078602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.10.19 03.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.10.19 03.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.10.19 03.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.10.19 03.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.10.19 03.42	
o-Terphenyl	84-15-1	92	%	70-135	02.10.19 03.42	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-008	Date Collected:	02.05.19 15.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.19 00.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.19 00.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.12.19 00.56	
1,4-Difluorobenzene	540-36-3	90	%	70-130	02.12.19 00.56	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-009	Date Collected:	02.05.19 16.00		

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.08.19 14.00	Basis:	Wet Weight
Seq Number:	3078643				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**179**	5.03	mg/kg	02.08.19 22.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.09.19 14.00	Basis:	Wet Weight
Seq Number:	3078602				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.10.19 04.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**79.9**	15.0	mg/kg	02.10.19 04.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.6**	15.0	mg/kg	02.10.19 04.02		1
Total TPH	PHC635	**96.5**	15.0	mg/kg	02.10.19 04.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.10.19 04.02	
o-Terphenyl	84-15-1	95	%	70-135	02.10.19 04.02	

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LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-009	Date Collected:	02.05.19 16.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.12.19 01.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.19 01.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.12.19 01.17	
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.12.19 01.17	

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id: **PH10A** Matrix: Soil Date Received:02.08.19 12.45
Lab Sample Id: 614004-010 Date Collected: 02.05.19 16.05 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 02.08.19 14.00 Basis: Wet Weight
Seq Number: 3078643

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	4.99	mg/kg	02.08.19 22.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.09.19 14.00 Basis: Wet Weight
Seq Number: 3078602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.10.19 04.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**101**	14.9	mg/kg	02.10.19 04.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**20.0**	14.9	mg/kg	02.10.19 04.23		1
Total TPH	PHC635	**121**	14.9	mg/kg	02.10.19 04.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.10.19 04.23	
o-Terphenyl	84-15-1	94	%	70-135	02.10.19 04.23	

Certificate of Analytical Results 614004

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	02.08.19 12.45
Lab Sample Id:	614004-010	Date Collected:	02.05.19 16.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.08.19 17.00	Basis:	Wet Weight
Seq Number:	3078779				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.12.19 01.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.19 01.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.12.19 01.39	
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.12.19 01.39	

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 614004

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671460-1-BLK LCS Sample Id: 7671460-1-BKS LCSD Sample Id: 7671460-1-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	233	93	254	102	90-110	9	20	mg/kg	02.08.19 20:59	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614004-001 MS Sample Id: 614004-001 S MSD Sample Id: 614004-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	281	112	264	106	90-110	6	20	mg/kg	02.08.19 21:18	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3078643 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614004-010 MS Sample Id: 614004-010 S MSD Sample Id: 614004-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	155	250	409	102	403	99	90-110	1	20	mg/kg	02.08.19 22:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671417-1-BLK LCS Sample Id: 7671417-1-BKS LCSD Sample Id: 7671417-1-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	936	94	891	89	70-135	5	20	mg/kg	02.08.19 21:33	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	966	97	70-135	10	20	mg/kg	02.08.19 21:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		129		130		70-135	%	02.08.19 21:33
o-Terphenyl	100		122		123		70-135	%	02.08.19 21:33

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 614004

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078602 Matrix: Solid Date Prep: 02.09.19
MB Sample Id: 7671426-1-BLK LCS Sample Id: 7671426-1-BKS LCSD Sample Id: 7671426-1-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	887	89	902	90	70-135	2	20	mg/kg	02.10.19 02:02	
Diesel Range Organics (DRO)	<8.13	1000	921	92	903	90	70-135	2	20	mg/kg	02.10.19 02:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		121		122		70-135	%	02.10.19 02:02
o-Terphenyl	103		117		117		70-135	%	02.10.19 02:02

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078596 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614002-001 MS Sample Id: 614002-001 S MSD Sample Id: 614002-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.9	997	913	90	817	80	70-135	11	20	mg/kg	02.08.19 22:34	
Diesel Range Organics (DRO)	<8.10	997	1010	101	889	89	70-135	13	20	mg/kg	02.08.19 22:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		123		70-135	%	02.08.19 22:34
o-Terphenyl	126		117		70-135	%	02.08.19 22:34

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3078602 Matrix: Soil Date Prep: 02.09.19
Parent Sample Id: 614004-007 MS Sample Id: 614004-007 S MSD Sample Id: 614004-007 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)	8.86	999	877	87	908	90	70-135	3	20	mg/kg	02.10.19 11:48	
Diesel Range Organics (DRO)	41.1	999	939	90	952	91	70-135	1	20	mg/kg	02.10.19 11:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		121		70-135	%	02.10.19 11:48
o-Terphenyl	114		116		70-135	%	02.10.19 11:48

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 614004

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078779 Matrix: Solid Date Prep: 02.08.19
MB Sample Id: 7671481-1-BLK LCS Sample Id: 7671481-1-BKS LCSD Sample Id: 7671481-1-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	0.0958	96	0.127	127	70-130	28	35	mg/kg	02.11.19 20:17	
Toluene	<0.00200	0.0998	0.0831	83	0.106	106	70-130	24	35	mg/kg	02.11.19 20:17	
Ethylbenzene	<0.00200	0.0998	0.0950	95	0.121	121	70-130	24	35	mg/kg	02.11.19 20:17	
m,p-Xylenes	<0.00399	0.200	0.178	89	0.234	117	70-130	27	35	mg/kg	02.11.19 20:17	
o-Xylene	<0.00200	0.0998	0.0848	85	0.110	110	70-130	26	35	mg/kg	02.11.19 20:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		107		117		70-130	%	02.11.19 20:17
4-Bromofluorobenzene	83		88		87		70-130	%	02.11.19 20:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3078779 Matrix: Soil Date Prep: 02.08.19
Parent Sample Id: 614004-001 MS Sample Id: 614004-001 S MSD Sample Id: 614004-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.113	112	0.115	114	70-130	2	35	mg/kg	02.11.19 21:01	
Toluene	<0.00202	0.101	0.0872	86	0.0903	89	70-130	3	35	mg/kg	02.11.19 21:01	
Ethylbenzene	<0.00202	0.101	0.0961	95	0.0990	98	70-130	3	35	mg/kg	02.11.19 21:01	
m,p-Xylenes	<0.00403	0.202	0.186	92	0.184	92	70-130	1	35	mg/kg	02.11.19 21:01	
o-Xylene	<0.00202	0.101	0.104	103	0.109	108	70-130	5	35	mg/kg	02.11.19 21:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		119		70-130	%	02.11.19 21:01
4-Bromofluorobenzene	77		90		70-130	%	02.11.19 21:01

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 614007

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:	PLU 420 Battery	Turn Around	
Project Number:	012918193	Routine ☐	
P.O. Number:	2RP5102	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6/3.5	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH06	S	2/5	14:35	surface	1			
PH06A	S	2/5	14:45	1'	1			
PH07	S	2/5	14:50	surface	1			
PH07A	S	2/5	15:00	1'	1			
PH08	S	2/6	14:50	surface	1			
PH08A	S	2/6	14:52	1'	1			
PH09	S	2/5	15:45	surface	1			
PH09A	S	2/5	15:50	1'	1			
PH10	S	2/5	16:00	surface	1			
PH10A	S	2/5	16:05	1'	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	Anna Byers		2/7/19 10:35			
2						
3						
4						
5						
6						

Revised Date 051418 Rev. 2018.1

77442053 2356

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/08/2019 12:45:00 PM

Work Order #: 614004

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/08/2019

Checklist reviewed by: Jessica Kramer Date: 02/11/2019

Analytical Report 615143

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

21-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)

21-FEB-19

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

Reference: XENCO Report No(s): **615143**
PLU 420 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) 615143. 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. 615143 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH13	S	02-19-19 10:25	0.3 ft	615143-001
BH13A	S	02-19-19 10:30	3.5 ft	615143-002
BH14	S	02-19-19 10:40	0.3 ft	615143-003
BH14A	S	02-19-19 10:45	3.0 ft	615143-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3079849 BTEX by EPA 8021B

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

Certificate of Analysis Summary 615143

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Feb-20-19 12:49 pm
Report Date: 21-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	615143-001		615143-002		615143-003		615143-004					
	Field Id:	BH13		BH13A		BH14		BH14A					
	Depth:	0.3- ft		3.5- ft		0.3- ft		3.0- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Feb-19-19 10:25		Feb-19-19 10:30		Feb-19-19 10:40		Feb-19-19 10:45					
BTEX by EPA 8021B	***Extracted:***	Feb-20-19 14:30		Feb-20-19 14:30		Feb-20-19 14:30		Feb-20-19 14:30					
	Analyzed:	Feb-20-19 20:06		Feb-20-19 20:26		Feb-20-19 20:45		Feb-20-19 21:04					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Feb-20-19 14:00		Feb-20-19 14:00		Feb-20-19 14:00		Feb-20-19 14:00					
	Analyzed:	Feb-20-19 21:03		Feb-20-19 21:09		Feb-20-19 21:15		Feb-20-19 21:22					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.96	4.96	<4.96	4.96	<5.00	5.00	<5.00	5.00				
TPH by SW8015 Mod	***Extracted:***	Feb-20-19 13:00		Feb-20-19 13:00		Feb-20-19 13:00		Feb-20-19 13:00					
	Analyzed:	Feb-20-19 22:16		Feb-20-19 22:35		Feb-20-19 22:55		Feb-20-19 23:15					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH13**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-001	Date Collected:	02.19.19 10.25	Sample Depth:	0.3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.20.19 21.03	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 22.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.20.19 22.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 22.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.20.19 22.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.20.19 22.16	
o-Terphenyl	84-15-1	82	%	70-135	02.20.19 22.16	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH13**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-001	Date Collected:	02.19.19 10.25	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 14.30	Basis:	Wet Weight
Seq Number:	3079849				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.20.19 20.06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.20.19 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	02.20.19 20.06	
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.20.19 20.06	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH13A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-002	Date Collected:	02.19.19 10.30	Sample Depth:	3.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.20.19 21.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 22.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.20.19 22.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 22.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.20.19 22.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.20.19 22.35	
o-Terphenyl	84-15-1	89	%	70-135	02.20.19 22.35	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH13A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-002	Date Collected:	02.19.19 10.30	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 14.30	Basis:	Wet Weight
Seq Number:	3079849				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.20.19 20.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.20.19 20.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.20.19 20.26	
4-Bromofluorobenzene	460-00-4	107	%	70-130	02.20.19 20.26	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH14**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-003	Date Collected:	02.19.19 10.40	Sample Depth:	0.3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.20.19 21.15	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 22.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.20.19 22.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 22.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.20.19 22.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.20.19 22.55	
o-Terphenyl	84-15-1	84	%	70-135	02.20.19 22.55	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH14**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-003	Date Collected:	02.19.19 10.40	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 14.30	Basis:	Wet Weight
Seq Number:	3079849				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.20.19 20.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.20.19 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.20.19 20.45	
4-Bromofluorobenzene	460-00-4	127	%	70-130	02.20.19 20.45	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH14A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-004	Date Collected:	02.19.19 10.45	Sample Depth:	3.0 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.20.19 21.22	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 23.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.20.19 23.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 23.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.20.19 23.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.20.19 23.15	
o-Terphenyl	84-15-1	89	%	70-135	02.20.19 23.15	

Certificate of Analytical Results 615143

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH14A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615143-004	Date Collected:	02.19.19 10.45	Sample Depth:	3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 14.30	Basis:	Wet Weight
Seq Number:	3079849				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.20.19 21.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.20.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.20.19 21.04	
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.20.19 21.04	

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 615143

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672210-1-BLK LCS Sample Id: 7672210-1-BKS LCSD Sample Id: 7672210-1-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	233	93	250	100	90-110	7	20	mg/kg	02.20.19 18:29	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 614972-003 MS Sample Id: 614972-003 S MSD Sample Id: 614972-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.72	249	263	105	265	105	90-110	1	20	mg/kg	02.20.19 20:17	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 615062-003 MS Sample Id: 615062-003 S MSD Sample Id: 615062-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	254	102	269	108	90-110	6	20	mg/kg	02.20.19 18:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3079924 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672196-1-BLK LCS Sample Id: 7672196-1-BKS LCSD Sample Id: 7672196-1-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	942	94	982	98	70-135	4	20	mg/kg	02.20.19 15:00	
Diesel Range Organics (DRO)	<8.13	1000	952	95	983	98	70-135	3	20	mg/kg	02.20.19 15:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		125		129		70-135	%	02.20.19 15:00
o-Terphenyl	101		121		124		70-135	%	02.20.19 15:00

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

QC Summary 615143

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3079924 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 614849-001 MS Sample Id: 614849-001 S MSD Sample Id: 614849-001 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)	<8.00	1000	920	92	936	94	70-135	2	20	mg/kg	02.20.19 15:59	
Diesel Range Organics (DRO)	<8.13	1000	946	95	963	96	70-135	2	20	mg/kg	02.20.19 15:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		125		70-135	%	02.20.19 15:59
o-Terphenyl	122		117		70-135	%	02.20.19 15:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3079849 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672187-1-BLK LCS Sample Id: 7672187-1-BKS LCSD Sample Id: 7672187-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.122	121	0.119	119	70-130	2	35	mg/kg	02.20.19 18:14	
Toluene	<0.000459	0.101	0.106	105	0.104	104	70-130	2	35	mg/kg	02.20.19 18:14	
Ethylbenzene	<0.000569	0.101	0.101	100	0.0993	100	70-130	2	35	mg/kg	02.20.19 18:14	
m,p-Xylenes	<0.00102	0.202	0.203	100	0.200	101	70-130	1	35	mg/kg	02.20.19 18:14	
o-Xylene	<0.000347	0.101	0.0991	98	0.0975	98	70-130	2	35	mg/kg	02.20.19 18:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		108		70-130	%	02.20.19 18:14
4-Bromofluorobenzene	96		96		96		70-130	%	02.20.19 18:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3079849 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 614638-014 MS Sample Id: 614638-014 S MSD Sample Id: 614638-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0849	85	0.0895	90	70-130	5	35	mg/kg	02.20.19 18:52	
Toluene	<0.000457	0.100	0.0749	75	0.0742	74	70-130	1	35	mg/kg	02.20.19 18:52	
Ethylbenzene	<0.000566	0.100	0.0680	68	0.0655	66	70-130	4	35	mg/kg	02.20.19 18:52	X
m,p-Xylenes	<0.00102	0.200	0.139	70	0.132	66	70-130	5	35	mg/kg	02.20.19 18:52	X
o-Xylene	<0.000345	0.100	0.0671	67	0.0642	64	70-130	4	35	mg/kg	02.20.19 18:52	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	02.20.19 18:52
4-Bromofluorobenzene	102		100		70-130	%	02.20.19 18:52

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 615143

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

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	01291B193	Routine	☐
P.O. Number:	2RP5102	Rush:	same day
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 0.2	Thermometer ID:		
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH13	S	2/19	10:25	0.3'	1	X	X	X
BH13A	S	2/19	10:30	3.5'	1	X	X	X
BH14	S	2/19	10:40	0.3'	1	X	X	X
BH14A	S	2/19	10:45	3.0'	1	X	X	X

QB 02/19/19

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Timothy L. Elliott	2/19/19 @ 1500	2			2/20/19 1249
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Final 1.000

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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: 02/20/2019 12:49:00 PM

Work Order #: 615143

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 02/20/2019
Brianna Teel

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

Analytical Report 615142

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 420 Battery

012918193

21-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)

21-FEB-19

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

Reference: XENCO Report No(s): **615142**
PLU 420 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) 615142. 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. 615142 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 615142

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH15	S	02-19-19 11:05	0.3 ft	615142-001
BH15A	S	02-19-19 11:25	3.0 ft	615142-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3079858 BTEX by EPA 8021B

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

Certificate of Analysis Summary 615142

LT Environmental, Inc., Arvada, CO

Project Name: PLU 420 Battery

Project Id: 012918193
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Wed Feb-20-19 12:49 pm
Report Date: 21-FEB-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	615142-001		615142-002					
	Field Id:	BH15		BH15A					
	Depth:	0.3- ft		3.0- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-19-19 11:05		Feb-19-19 11:25					
BTEX by EPA 8021B	***Extracted:***	Feb-20-19 13:00		Feb-20-19 13:00					
	Analyzed:	Feb-20-19 18:26		Feb-20-19 18:47					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-20-19 14:00		Feb-20-19 14:00					
	Analyzed:	Feb-20-19 21:28		Feb-20-19 21:34					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		10.8	5.00	25.9	4.98				
TPH by SW8015 Mod	***Extracted:***	Feb-20-19 13:00		Feb-20-19 13:00					
	Analyzed:	Feb-20-19 21:36		Feb-20-19 21:56					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		19.2	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		19.2	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 615142

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH15**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615142-001	Date Collected:	02.19.19 11.05	Sample Depth:	0.3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.8**	5.00	mg/kg	02.20.19 21.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 21.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.2**	15.0	mg/kg	02.20.19 21.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 21.36	U	1
Total TPH	PHC635	**19.2**	15.0	mg/kg	02.20.19 21.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.20.19 21.36	
o-Terphenyl	84-15-1	84	%	70-135	02.20.19 21.36	

Certificate of Analytical Results 615142

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH15**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615142-001	Date Collected:	02.19.19 11.05	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079858				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.20.19 18.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.20.19 18.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.20.19 18.26	
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.20.19 18.26	

Certificate of Analytical Results 615142

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH15A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615142-002	Date Collected:	02.19.19 11.25	Sample Depth:	3.0 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.20.19 14.00	Basis:	Wet Weight
Seq Number:	3079943				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.9**	4.98	mg/kg	02.20.19 21.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079924				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.20.19 21.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.20.19 21.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.20.19 21.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.20.19 21.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.20.19 21.56	
o-Terphenyl	84-15-1	88	%	70-135	02.20.19 21.56	

Certificate of Analytical Results 615142

LT Environmental, Inc., Arvada, CO

PLU 420 Battery

Sample Id:	**BH15A**	Matrix:	Soil	Date Received:	02.20.19 12.49
Lab Sample Id:	615142-002	Date Collected:	02.19.19 11.25	Sample Depth:	3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.20.19 13.00	Basis:	Wet Weight
Seq Number:	3079858				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.20.19 18.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.20.19 18.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.20.19 18.47	
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.20.19 18.47	

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 615142

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672210-1-BLK LCS Sample Id: 7672210-1-BKS LCSD Sample Id: 7672210-1-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	233	93	250	100	90-110	7	20	mg/kg	02.20.19 18:29	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 614972-003 MS Sample Id: 614972-003 S MSD Sample Id: 614972-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.72	249	263	105	265	105	90-110	1	20	mg/kg	02.20.19 20:17	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3079943 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 615062-003 MS Sample Id: 615062-003 S MSD Sample Id: 615062-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	254	102	269	108	90-110	6	20	mg/kg	02.20.19 18:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3079924 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672196-1-BLK LCS Sample Id: 7672196-1-BKS LCSD Sample Id: 7672196-1-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	942	94	982	98	70-135	4	20	mg/kg	02.20.19 15:00	
Diesel Range Organics (DRO)	<8.13	1000	952	95	983	98	70-135	3	20	mg/kg	02.20.19 15:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		125		129		70-135	%	02.20.19 15:00
o-Terphenyl	101		121		124		70-135	%	02.20.19 15:00

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

QC Summary 615142

LT Environmental, Inc.

PLU 420 Battery

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3079924 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 614849-001 MS Sample Id: 614849-001 S MSD Sample Id: 614849-001 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)	<8.00	1000	920	92	936	94	70-135	2	20	mg/kg	02.20.19 15:59	
Diesel Range Organics (DRO)	<8.13	1000	946	95	963	96	70-135	2	20	mg/kg	02.20.19 15:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		125		70-135	%	02.20.19 15:59
o-Terphenyl	122		117		70-135	%	02.20.19 15:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3079858 Matrix: Solid Date Prep: 02.20.19
MB Sample Id: 7672200-1-BLK LCS Sample Id: 7672200-1-BKS LCSD Sample Id: 7672200-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.118	118	0.107	106	70-130	10	35	mg/kg	02.20.19 16:17	
Toluene	<0.00200	0.100	0.0889	89	0.0971	96	70-130	9	35	mg/kg	02.20.19 16:17	
Ethylbenzene	<0.00200	0.100	0.0977	98	0.0999	99	70-130	2	35	mg/kg	02.20.19 16:17	
m,p-Xylenes	<0.00400	0.200	0.212	106	0.218	108	70-130	3	35	mg/kg	02.20.19 16:17	
o-Xylene	<0.00200	0.100	0.0941	94	0.0946	94	70-130	1	35	mg/kg	02.20.19 16:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		98		86		70-130	%	02.20.19 16:17
4-Bromofluorobenzene	77		93		95		70-130	%	02.20.19 16:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3079858 Matrix: Soil Date Prep: 02.20.19
Parent Sample Id: 615142-001 MS Sample Id: 615142-001 S MSD Sample Id: 615142-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.104	105	0.105	104	70-130	1	35	mg/kg	02.20.19 17:01	
Toluene	<0.00199	0.0994	0.0830	84	0.0825	82	70-130	1	35	mg/kg	02.20.19 17:01	
Ethylbenzene	<0.00199	0.0994	0.0966	97	0.0922	91	70-130	5	35	mg/kg	02.20.19 17:01	
m,p-Xylenes	<0.00398	0.199	0.190	95	0.176	87	70-130	8	35	mg/kg	02.20.19 17:01	
o-Xylene	<0.00199	0.0994	0.0869	87	0.0839	83	70-130	4	35	mg/kg	02.20.19 17:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	123		120		70-130	%	02.20.19 17:01
4-Bromofluorobenzene	100		101		70-130	%	02.20.19 17:01

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: 615142

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North "A" St.	Address:	3104 E. Greene St
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178 /5752006754	Email:	abaker@ltenv.com & abyers@ltenv.com

Work Order Comments

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

Project Name:	PLU 420 Battery	Turn Around	
Project Number:	012918193	Routine ☐	
P.O. Number:	2RP5102	Rush: same day	
Sampler's Name:	Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 | 0.2	Thermometer ID:	VE
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH15	S	2/19	11:05	0.3'	1	X	X	X
BH15A	S	2/19	11:25	3.0'	1	X	X	X

AB 02/19/19

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	Timothy R. Elliott	2/19/19 @ 1500	2			2/20/19 1249
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Final 1.000

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: 02/20/2019 12:49:00 PM

Work Order #: 615142

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 02/20/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/20/2019
Jessica Kramer

ATTACHMENT 3: SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier:	Date:
PH01	1/25/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By:	Method:
32.09588331, -103.7784331	PID & Cl⁻ test strips	Anna Byers	Backhoe PH
		Hole Diameter: 2.5' x 5.0'	Total Depth: 7.5'

Comments: Pothole on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			yes		0	0.5'		(pad caliche)
moist	—	>15000	yes	a	1	1'	caliche	light brown, ~~moist~~, well graded particles m. to c. sand (>15%) ranging to gravel size, odor
moist	—	>15000	yes	b	2	2'	caliche	
dry	—	2367	no	c	3	3'	caliche	
dry	—	363.7	no	d	4	4'	caliche	
dry	—	106.8	no	e	5	5'	caliche	compact, light brown, dry, well graded particles ranging from m. to c. sand (>15%) to gravel size, no odor
dry	—	117.0	no	f		5.5'	caliche	
dry	—	577.2	no	g	6	6'	caliche	
dry	—	287.2	no	h		6.5'	caliche	
					7			
dry	<205	24.7	no	i		7.5'	caliche	total depth
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH02	1/25/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Anna Byers	Backhoe PH

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.09591271, -103.77851805	PID & Cl⁻ test strips	2.5' x 5.0'	

Comments: Pothole on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
moist	—	>15000	yes		0	0.5	caliche	(pad caliche) odor
moist	—	>15000	yes	a	2	2'	SW-SM	dark brown, f. to m. size particles, moist, well-graded sand, odor
dry	—	554.6	no	b	4	4.5'	caliche	light brown, caliche, m. sand (≥15%) to gravel size particles, well graded
dry	—	276.2	no	c	6	6.5'	caliche	
dry	—	878.2	no	d	8	8'	caliche	
dry	—	168.7	no	e	9	9'	caliche	no odor
dry	<205	64.7	no	f	10	10'	caliche	no odor
					11			total depth
					12			

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Identifier:	Date:
PH03	1/25/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By:	Method:
32.09593874, -103.7843396	PID & Cl^- test strips	Anna Byers	Backhoe PH
		Hole Diameter: 2.5' x 5.0'	Total Depth:

Comments: Pothole on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			yes		0			(pad caliche)
					1			
					2			
dry	—	193.5	no	a		2.5'	caliche	light brown, gravel to boulder size, 5-15% fines, well graded caliche odor
					3			
					4			
dry	—	2655	no	b		4.5'	gypsum	white, dry, soft fine grained gypsum odor
dry	—	6364	no	c	5	5.0'	caliche	light brown, m.c. sand (>15%) to gravel size particles, caliche odor
dry	—	383.5	no	d	6	6.0'	caliche	light brown, compact, m.c. sand (>15%) to gravel sized particles, caliche odor
					7			
dry	<205	671.1	no	e	8	8.0'		no odor
dry	—	311.3	no	f	9	9.0'		no odor
					10			total depth
					11			
					12			

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Identifier:	Date:
PH04	1/25/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By:	Method:
32.09598738, -103.77836988	PID & Cl⁻ test strips	Anna Byers	Backhoe PH
		Hole Diameter: 2.5' x 5.0'	Total Depth:

Comments: Pothole on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			yes		0	0.5		pad caliche
dry	—	3023	no	a	1	1'		odor light brown, m.c sand (>15%) to gravel sized particles, well sorted caliche
dry	—	735.1	no	b	2	2'		odor
dry	—	666.0	no	c	3	3'		no odor
dry	<205	61.1	no	d	4	4'		no odor
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

total depth

LT Environmental, Inc.

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Identifier:	Date:
PH05	1/25/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
Logged By: Anna Byers	Method: Backhoe PH
Hole Diameter: 2.5' x 5.0'	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.09599245, -103.77846666 Field Screening: PID & Cl- test strips

Comments: Pothole on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			yes		0	0.5'		pad caliche
dry	—	715000	no	a	1	1.5'	caliche	odor light brown, compact, m. to c.
dry	—	543.3	no	b	2	2'	caliche	odor Sand (>15%) to gravel size particles, well sorted caliche
					3			
dry	<205	159.2	no	c	4	4'	caliche	no odor — total depth
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH06	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
Logged By: Anna Byers	**Method:** shovel
Lat/Long:	**Field Screening:** PID
Hole Diameter: 1' x 1'	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D		0	N	PH06	0	0'	SP	no plasticity, dry, tan poorly-graded sand (m.)
		0	N	PH06A	1	1'	SP	↓ + compact
					2			TOT DEPTH
					3			
					4			
					5			
					6			OB 02/05/19
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH07	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Anna Byers / Method: shovel
Lat/Long:	Field Screening: PID / Hole Diameter: 1.0' x 1.0' / Total Depth: 1'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D		0	N	PH07	0	0'	SP	no plasticity, dry tan, compact poorly graded sand (m.)
		0	N	PH07A	1	1'	SP	↓ + compact
					2			TOT DEPTH
					3			
					4			
					5			
					6			02/05/19
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH08	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5107
Logged By: Anna Byers	**Method:** shovel
Lat/Long:	**Field Screening:** PID
Hole Diameter:	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Pasture (outside bermed containment)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D		0	N	PH08	0	0'	SP	red/brown sand (m.-c.), vegetated, dry, no plasticity
M	<180	0	N	PH08A	1	1'	SP	moist, red/brown sand (m.c.), no plasticity
					2			TOT DEPTH
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

02/05/19

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Identifier:	Date:
PH09	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
Logged By: Anna Byers	**Method:** shovel
Lat/Long:	**Field Screening:** PID
Hole Diameter: 1' x 1'	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N	PH09	0	0'	SP	grey sand (m - c.), ~~well~~ poorly graded, no plasticity ↓
D			N	PH09A	1	1'	SP	
					2			
					3			
					4			
					5			
					6			Qb Qt / 11/19
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
PH10	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Anna Byars	shovel

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
	PID	1'x1'	1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		0	0'		grey sand, (m-c.), no plasticity, poorly graded ↓
D			N		1	1'		
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

02/11/19

LT Environmental, Inc.
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Identifier:	Date:
PH11	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Anna Byers / Method: track hoe
Lat/Long:	Field Screening: PID / Hole Diameter: 2.5' x 5.0' / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			Y	~~FS13~~	0	excavated		stained caliche, odor, silt to gravel size
M		>15000	N		1		SC	brown, clayey sand poorly graded
	<180	>15000	N		2		CL	moist, dark brown/black, low plasticity clay
M	<180	>15000	N	FS13				
					3			moist, dark brown/black, low plasticity clay
M	<180	0	N	PH11	4		SW	brown, moist, ~~poorly~~ well-graded sand (f.-c.)
					5			TOT DEPTH
					6			
					7			
					8			
					9			02/05/19
					10			
					11			
					12			

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Identifier:	Date:
PH12	2/5/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
Logged By: Anna Byers	**Method:** shovel & rock bar
Lat/Long:	**Field Screening:** PID
Hole Diameter: 1.0' x 1.5'	**Total Depth:** 4.5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M		inconsistent, unreliable readings			0	excavated		moist, vegetated with tall thin grass, black / dark brown, odor, clayey sand with boulder sized rock fragments (caliche), mod. plasticity
					1			moist, dark brown clayey sand, rocky
					2			
					3		SW-SC	moist, dark brown to black, clayey sand, mod. plasticity, boulder sized rocks mixed in (caliche) dumps, twigs & sticks
	24077		N					
	24636B		N		4	4'	SW	moist brown/red sand, low plasticity (mix) top of caliche
				PH12	5	4.5'	caliche	well cemented, fine-medium grain size matrix, grey to brown, hard, random fracturing, lime stone/dolomite ... or other calcareous inclusions
					6			TOT DEPTH
					7			
					8			02/05/19
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220

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Identifier:	Date:
BH13	2/19/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP5102
Logged By: Anna Byers	**Method:** hand auger
Hole Diameter: 3"	**Total Depth:** 3.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.096080, -103.778375
Field Screening: PID
Comments: Pasture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<180	0	N	BH13	0	0.3'	SP	reddish brown, poorly graded, ~~too~~ no plasticity sand (c.c); root fragments
M		0		—	1			low plasticity "
		0		—	2			
					3			
	<180	0		BH13A		3.5'	SP	TOT Depth
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH14	2/19/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP 5102

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Anna Byers	hand auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.096080, -103.778375	PID	3"	3'

Comments: Pasture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<180	0	N	BH14	0	0.3'	SP	reddish brown, poorly graded, no plasticity sand (c.); root fragments
M		0		-	1			low plasticity " sand (c.)
		0		-	2			
M	<180	0		BH14A	3	3.0'	SP	TOT Depth
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
BH15	2/19/19
Project Name:	**RP Number:**
PLU 420 Battery	2RP 5102

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Anna Byers	Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.096080, -103.778375	PID	3"	3'

Comments: Within berm on pad

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0	PAD	CALICHE	
D	<3000	0	N	BH15		0.3'	SW	light grey, well graded, no plasticity sand
m		0		–	1		SP	reddish brown, poorly graded, low plasticity sand (c.); root fragments
						1.5		
		0		–	2			
m	<3000	0		BH15A	3	3.0'	SP	TOT Depth
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

View of release extent on the caliche well pad, facing northeast.

Project: 012918193	XTO Energy, Inc. Poker Lake Unit #420 Battery	LTE Advancing Opportunity
January 21, 2019	Photographic Log	

View of excavation facing south toward tank battery.

Project: 012918193	XTO Energy, Inc. Poker Lake Unit #420 Battery	LTE Advancing Opportunity
February 5, 2019	Photographic Log	

View of excavation facing northeast toward pasture.

Project: 012918193	XTO Energy, Inc. Poker Lake Unit #420 Battery	LTE Advancing Opportunity
February 5, 2019	Photographic Log	