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

April 4, 2019

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

RE: Proposed Work Plan
Poker Lake Unit CVX JV RB 001H Pipeline Right-Of-Way
Remediation Permit Number 2RP-5185
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing remediation activities completed to date and a proposed work plan to address residual impacted soil at the Poker Lake Unit CVX JV RB 001H pipeline (Site) right-of-way (ROW). The Site is located in Unit F, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the remediation activities and proposed work plan is to address impacts to soil after a crude oil pipeline release at the Site.

On January 5, 2019, internal corrosion caused a release of approximately 40.5 barrels (bbls) of crude oil from a 6-inch buried oil pipeline. The release occurred in the pipeline ROW and flowed west into the adjacent pasture. A hydro-vacuum truck was dispatched to the Site to empty the remaining fluid from the pipeline and recover the free-standing fluids; approximately 1 bbl of crude oil was recovered from the ground surface. The line was clamped until further repairs could be made. Approximately 8,110 square feet of pasture west of the pipeline ROW was affected by the release. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on January 10, 2019, and was assigned Remediation Permit (RP) Number 2RP-5185 (Attachment 1).

This proposed work plan summarizes remediation activities and is designed to address remaining impacts to soil by installing a 20-mil impermeable liner in the subsurface.

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321544103523701 23S.30E.33.244112, located approximately 1.17 miles northeast of the Site. The water well has a

depth to groundwater of 490.37 feet and a total depth of 696 feet. The water well is approximately 30 feet higher in elevation than the Site. The nearest continuously flowing water or significant watercourse is an unnamed dry wash located 5,241 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low karst area. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 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. A closure criteria of 600 mg/kg chloride was applied to the undeveloped pasture that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet or greater for areas that will be reclaimed following remediation.

PRELIMINARY SOIL SAMPLING ACTIVITIES

On January 10, 2019, LTE personnel inspected the Site to evaluate the release extent. Surface hydrocarbon staining was observed in the pasture release area west of the pipeline ROW. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. LTE personnel collected nine preliminary soil samples (SS01 through SS09) within the release area from depths ranging from 0.5 feet to 6 feet bgs to assess the lateral and vertical extent of soil impacts.

The soil samples were screened for volatile aromatic hydrocarbons and chloride using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.0. The preliminary soil sample locations and depths are presented on Figure 2.

Laboratory analytical results for preliminary soil samples SS01 through SS09 indicated that BTEX, GRO/DRO, and TPH concentrations exceeded the NMOCD Table 1 closure criteria. Based on the laboratory analytical results, excavation of impacted soil was required. The laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2.

DELINEATION ACTIVITIES

During March 2019, LTE personnel returned to the Site to oversee potholing and excavation activities. Potholes were advanced via backhoe and trackhoe at five of the preliminary soil sample locations (SS03 through SS06 and SS08), and potholes BH01 and BH02 were advanced via hand auger near the eastern release extent. The potholes were completed to further delineate the lateral and vertical extent of impacted soil and help guide excavation activities, which occurred simultaneously. Soil was field screened in each pothole using a PID and Hach® chloride QuanTab® test strips. Delineation soil samples were collected from potholes BH01 and BH02 from depths ranging from 6.5 feet to 24 feet bgs. Delineation soil samples were collected from potholes SS03 through SS06 and SS08 from depths ranging from 4 feet to 23 feet bgs. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The delineation soil sample locations and depths are presented on Figure 3, and soil sample logs are included as Attachment 3.

Laboratory analytical results for the soil samples collected from potholes BH01 and BH02 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results for the soil samples collected from potholes SS03 through SS06 and SS08 indicated that soil samples SS03A, SS04A, SS05A, SS05B, SS06A, SS06B, and SS06C collected from depths ranging from 4 feet to 16 feet bgs exceeded the NMOCD Table 1 closure criteria for BTEX and/or TPH. Laboratory analytical results for soil samples SS03B, SS04B, SS05C, SS05D, SS05E, SS06D, SS08A, and SS08B collected from depths ranging from 11 feet to 23 feet bgs indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. The laboratory analytical results are presented on Figure 3 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2.

EXCAVATION ACTIVITIES

During March 2019, LTE personnel was at the Site to oversee excavation of impacted soil 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. Impacted soil was excavated to a depth of 4 feet to 4.5 feet bgs. Following removal of impacted soil above 4 feet bgs, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW39 were collected from the sidewalls of the excavation from depths of 0 to 4 feet bgs or 0 to 4.5 feet bgs. Composite soil samples FS01 through FS15 were collected from the floor of the excavation from depths of 4 feet or 4.5 feet bgs. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The excavation soil sample locations and depths are presented on Figure 4.

The excavation measured approximately 21,700 square feet in area. The horizontal extent of the excavation is presented on Figure 4. A total of approximately 10,850 cubic yards of impacted soil were removed from the excavation. The impacted soil will be transported and properly disposed of at the Lea Land landfill facility, in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, and/or TPH concentrations initially exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS09. Impacted soil was excavated to a depth of 4 feet to 4.5 feet bgs. Laboratory analytical results for excavation sidewall samples SW01 through SW36 collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and below 600 mg/kg for chloride in samples collected at or above 4 feet bgs. Based on the laboratory analytical results, no further lateral excavation was required.

Laboratory analytical results for excavation floor samples FS01, FS02, FS09, and FS14 collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and below 600 mg/kg for chloride in samples collected at or above 4 feet bgs. Based on the laboratory analytical results for excavation floor samples FS01 and FS02 and delineation samples from potholes BH01 and BH02, no further vertical excavation was required in the eastern portion of the excavation.

Laboratory analytical results for excavation floor samples FS03 through FS08, FS10 through FS13, and FS15 collected from the final excavation extent indicated that BTEX and/or TPH exceeded the NMOCD Table 1 closure criteria. Based on the laboratory analytical results for excavation floor samples FS03 through FS08, FS10 through FS13, and FS15 and delineation samples from potholes SS04, SS05, and SS06, impacted soil remained in place below 4 feet in the central and western portions of the excavation.

The soil sample locations and depths are presented on Figure 2 through Figure 4. The laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

PROPOSED WORK PLAN

The impacted soil was excavated from the release area to a depth of 4 feet to 4.5 feet bgs. A total of approximately 10,850 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place below 4 feet bgs in the central and western portions of the excavation. An estimated 8,000 cubic yards of impacted soil remain in place, assuming a maximum 20-foot depth based on soil samples collected from potholes BH01, BH02, SS04, SS05, SS06, and SS08.

Pothole and excavation soil sampling provided full vertical and lateral delineation of the impacted soil, which extended past 4 feet bgs. Due to the nature of the release and extent of contamination in the subsurface, XTO requests to install a 20-mil impermeable liner over the residual impacted soil to mitigate further impacts into the subsurface. XTO will complete the liner installation within 90 days of the date of approval of this work plan by NMOCD. An updated NMOCD Form C-141 is included in Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Robert Hamlet, NMOCD
Jim Amos, U.S. Bureau of Land Management
Crystal Weaver, U.S. Bureau of Land Management

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-5185)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Soil Sampling Logs
Attachment 4	Photographic Log

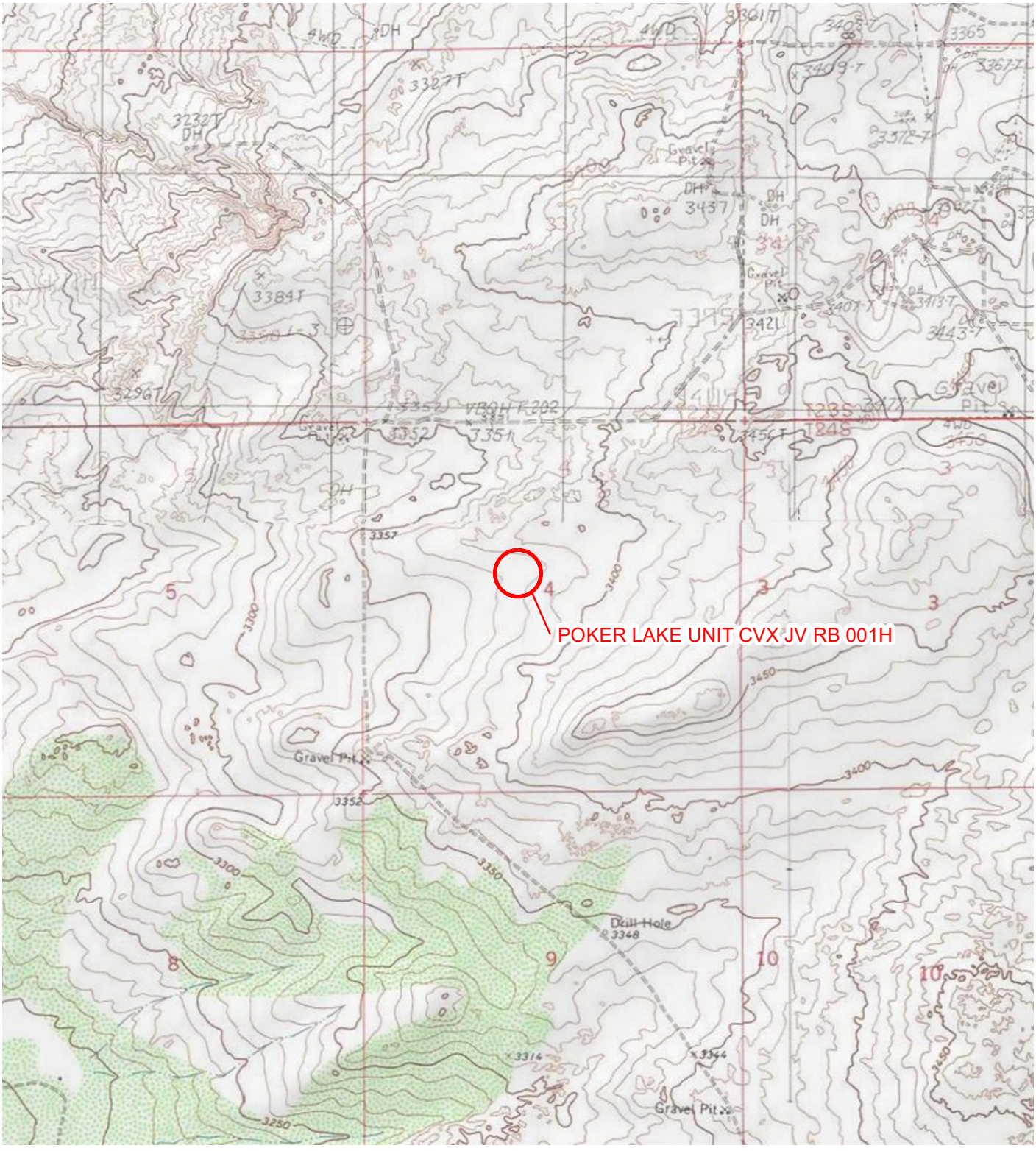

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5185

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT CVX JV RB 001H
UNIT F SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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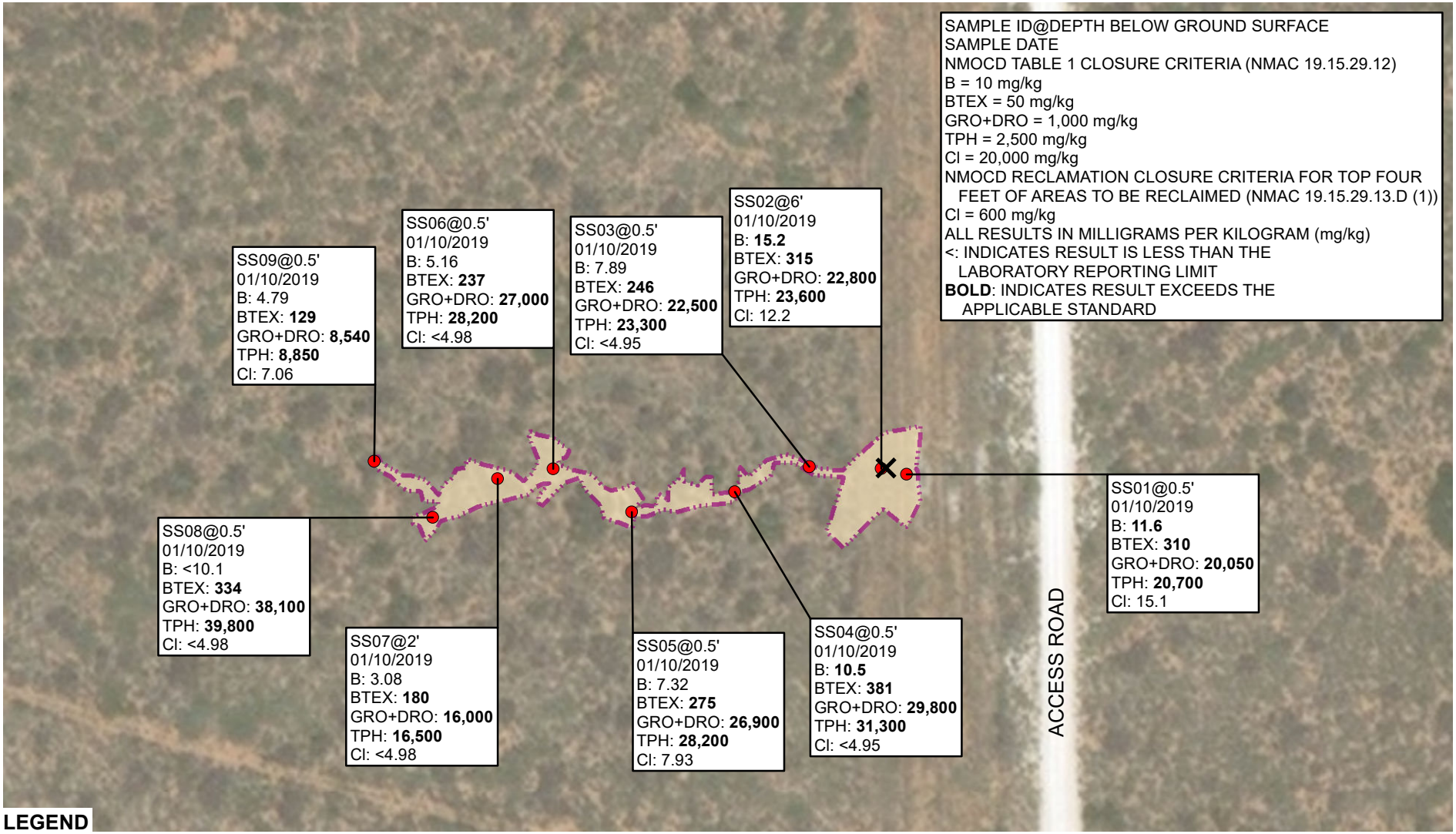

LEGEND

RELEASE LOCATION

PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS

RELEASE EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 100 200

Feet

N

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-5185

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV RB 001H
UNIT F SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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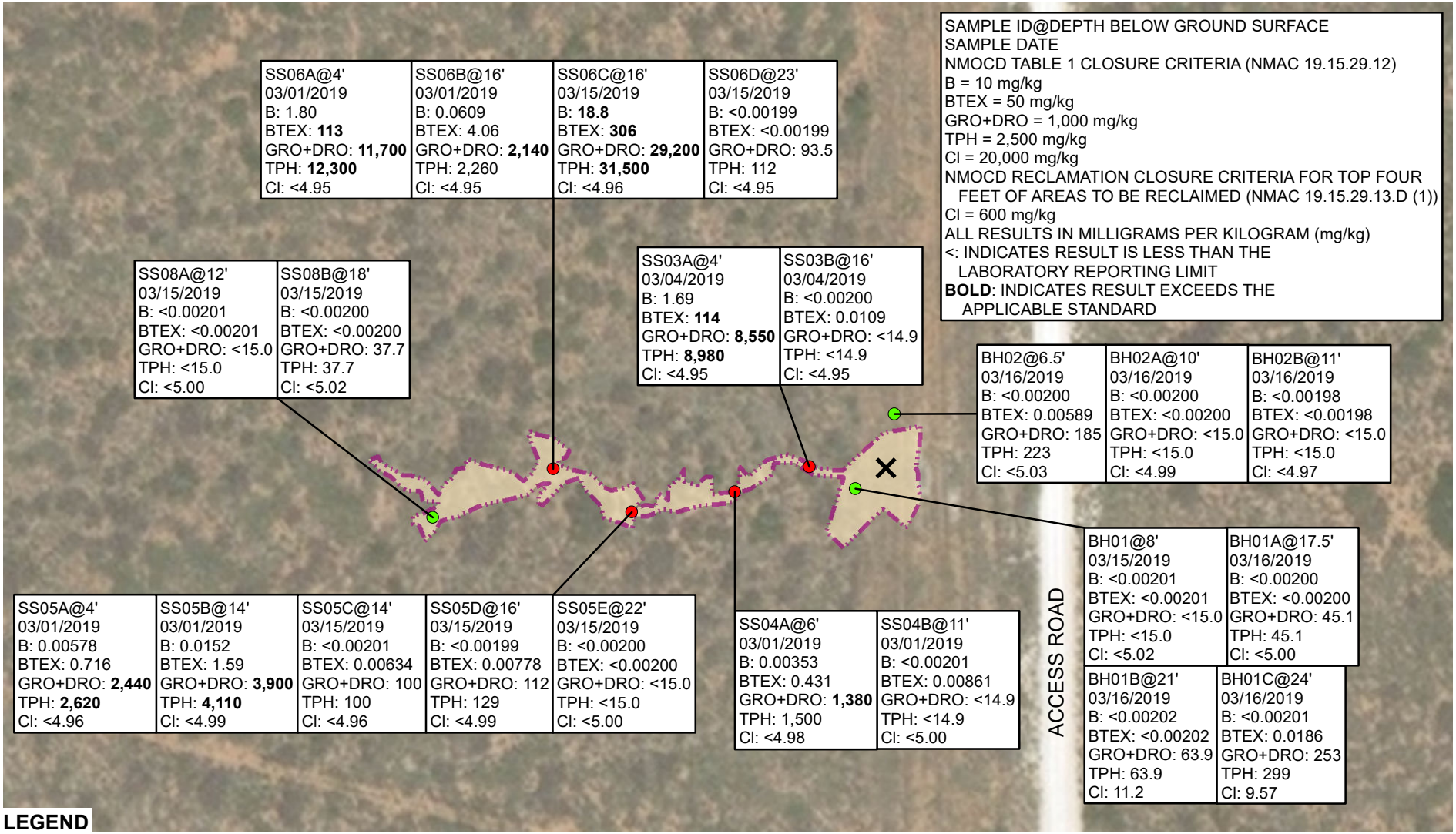


LEGEND

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

IMAGE COURTESY OF GOOGLE EARTH 2017

0 100 200 Feet

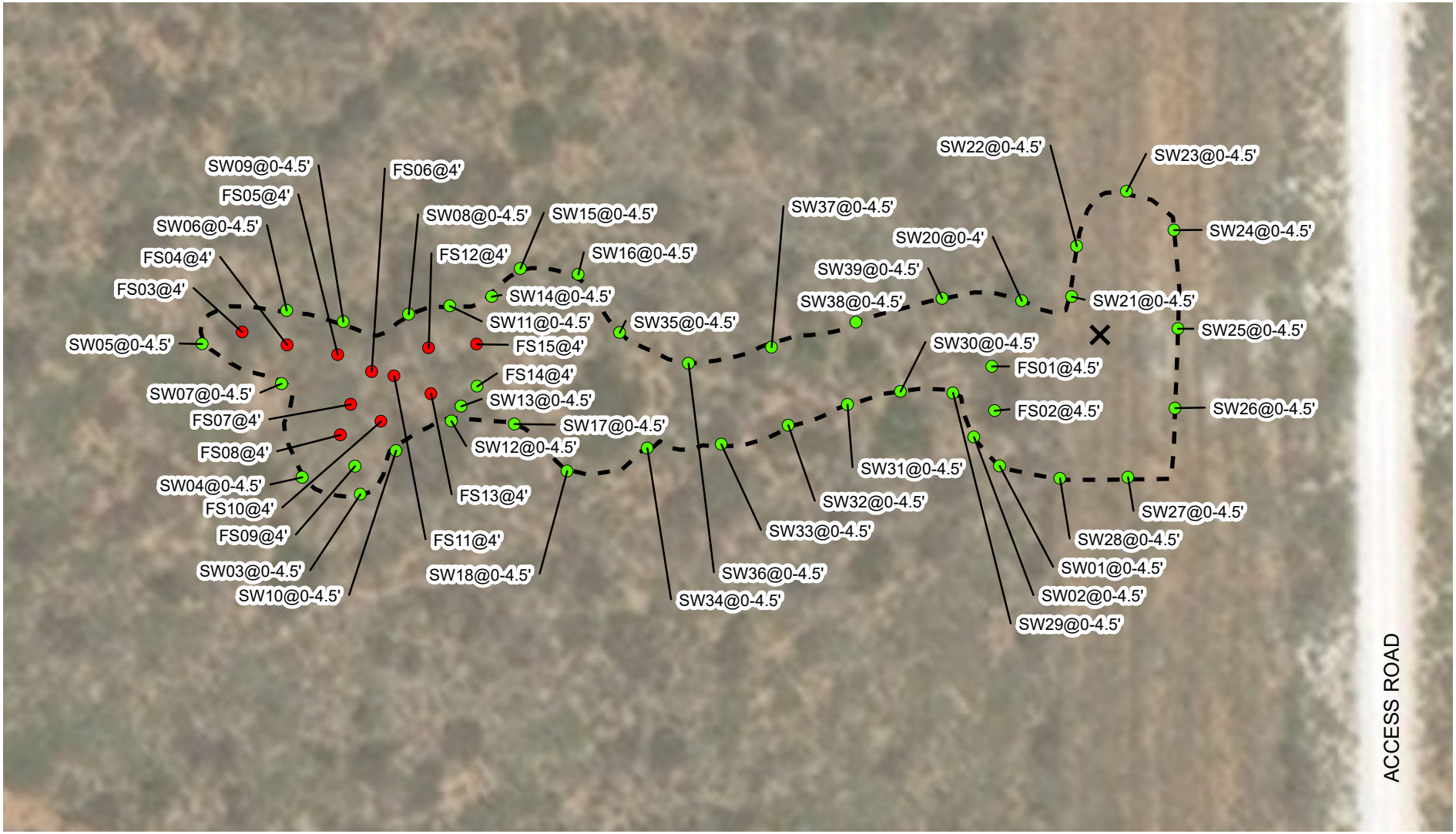
N

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-5185

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV RB 001H
UNIT F SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919007_PLU CVX JV RB 001H\012919007_FIG03_DELINEATION SS_2019_5185.mxd



LEGEND

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

NOTE: REMEDIATION PERMIT NUMBER 2RP-5185

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT CVX JV RB 001H
UNIT F SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV RB 001H
REMEDIATION PERMIT NUMBER 2RP-5185
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	01/10/2019	**11.6**	55.3	62.3	181	**310**	9,150	10,900	697	**20,050**	**20,700**	15.1*
SS02	6	01/10/2019	**15.2**	63.6	61.3	175	**315**	10,700	12,100	750	**22,800**	**23,600**	12.2
SS03	0.5	01/10/2019	7.89	45.1	49.8	144	**246**	9,660	12,800	888	**22,500**	**23,300**	<4.95*
SS04	0.5	01/10/2019	**10.5**	63.4	79.3	228	**381**	12,600	17,200	1,530	**29,800**	**31,300**	<4.95*
SS05	0.5	01/10/2019	7.32	46.7	57.4	163	**275**	11,100	15,800	1,310	**26,900**	**28,200**	7.93*
SS06	0.5	01/10/2019	5.16	39.3	49.1	144	**237**	10,000	17,000	1,160	**27,000**	**28,200**	<4.98*
SS07	2	01/10/2019	3.08	30.9	37.5	109	**180**	6,780	9,200	543	**16,000**	**16,500**	<4.98*
SS08	0.5	01/10/2019	<10.1	67.6	<10.1	267	**334**	14,600	23,500	1,660	**38,100**	**39,800**	<4.98*
SS09	0.5	01/10/2019	4.79	31.9	2.60	90.2	**129**	4,030	4,510	312	**8,540**	**8,850**	7.06*
SS04A	6	03/01/2019	0.00353	0.0816	0.0206	0.431	0.537	149	1,230	118	**1,380**	1,500	<4.98
SS04B	11	03/01/2019	<0.00201	<0.00201	0.00230	0.00631	0.00861	<14.9	<14.9	<14.9	<14.9	<14.9	<5.00
SS05A	4	03/01/2019	0.00578	0.18	0.0622	0.468	0.716	344	2,100	175	**2,440**	**2,620**	<4.96*
SS05B	14	03/01/2019	0.0152	0.293	0.0438	1.24	1.59	667	3,230	212	**3,900**	**4,110**	<4.99
SS06A	4	03/01/2019	1.80	19.7	22.2	69.4	**113**	3,850	7,880	551	**11,700**	**12,300**	<4.95*
SS06B	16	03/01/2019	0.0609	1.48	0.382	2.13	4.06	421	1,720	123	**2,140**	2,260	<4.95
FS01	4.5	03/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
FS02	4.5	03/04/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	17.3	<15.0	17.3	17.3	<4.98
SS03A	2	03/04/2019	1.69	18.3	23.1	70.8	**114**	2,820	5,730	426	**8,550**	**8,980**	<4.95*
SS03B	16	03/04/2019	<0.00200	<0.00200	0.00272	0.00819	0.0109	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
SW01	0 - 4.5	03/04/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
SW02	0 - 4.5	03/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
SW03	0 - 4.5	03/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	606
SW04	0 - 4.5	03/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SW05	0 - 4.5	03/07/2019	<0.00200	<0.00200	<0.00200	0.00786	0.00786	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97
SW06	0 - 4.5	03/07/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW07	0 - 4.5	03/07/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	32.9	<15.0	32.9	32.9	<5.02
SW08	0 - 4.5	03/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV RB 001H
REMEDIATION PERMIT NUMBER 2RP-5185
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)
SW09	0 - 4.5	03/07/2019	<0.00202	0.00218	<0.00202	<0.00202	0.00218	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW10	0 - 4.5	03/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW11	0 - 4.5	03/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SW12	0 - 4.5	03/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SW13	0 - 4.5	03/08/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
SW14	0 - 4.5	03/08/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<5.01
SW15	0 - 4.5	03/08/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	<4.96
SW16	0 - 4.5	03/08/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW17	0 - 4.5	03/08/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	16.8	<15.0	16.8	16.8	<4.96
SW18	0 - 4.5	03/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
FS03	4	03/11/2019	0.0286	5.08	1.07	10.7	16.9	607	1,710	190	**2,320**	**2,510**	<5.03*
FS04	4	03/11/2019	0.0379	4.79	0.954	9.68	15.5	621	2,290	249	**2,910**	**3,160**	<4.96*
FS05	4	03/11/2019	0.00807	0.208	<0.499	0.358	0.574	271	1,170	133	**1,440**	1,570	<4.99*
FS06	4	03/11/2019	0.0600	8.89	1.28	38.3	48.5	1,030	3,080	298	**4,110**	**4,410**	<4.95*
FS07	4	03/11/2019	0.0841	14	22.3	57.5	**93.9**	1,440	3,770	362	**5,210**	**5,570**	<4.97*
FS08	4	03/11/2019	0.0402	6.06	0.911	35.6	42.6	949	3,180	303	**4,130**	**4,430**	<4.99*
FS09	4	03/11/2019	<0.00198	<0.00198	<0.00198	0.00457	0.00457	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
FS10	4	03/11/2019	0.0274	4.01	0.531	26.0	30.6	796	3,100	302	**3,900**	**4,200**	<4.99*
FS11	4	03/11/2019	0.101	5.02	0.601	26.9	32.6	1,520	5,020	575	**6,540**	**7,120**	<4.95*
FS12	4	03/11/2019	0.0749	10.1	17.6	47.0	**74.7**	1,570	4,970	433	**6,540**	**6,970**	<5.02*
FS13	4	03/11/2019	0.0810	8.38	15.4	40.8	**64.6**	1,200	3,870	333	**5,070**	**5,400**	<5.00*
FS14	4	03/11/2019	<0.00201	0.00382	0.00359	0.0104	0.0178	<15.0	19.3	<15.0	19.3	19.3	<4.98*
FS15	4	03/11/2019	0.00282	0.12	<0.499	8.01	8.13	234	1,160	127	**1,400**	1,520	<4.96*
SW20	0 - 4	03/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01
SW21	0 - 4.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW22	0 - 4.5	03/14/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW23	0 - 4.5	03/14/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	42.6	<15.0	42.6	42.6	<5.00

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV RB 001H
REMEDIATION PERMIT NUMBER 2RP-5185
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)
SW24	0 - 4.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	22.2	<15.0	22.2	22.2	<5.00
SW25	0 - 4.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	38.1	<15.0	38.1	38.1	<4.96
SW26	0 - 4.5	03/14/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
BH01	8	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.02
SS05C	14	03/15/2019	<0.00201	<0.00201	<0.00201	0.00634	0.00634	<15.0	100	<15.0	100	100	<4.96
SS05D	16	03/15/2019	<0.00199	<0.00199	<0.00199	0.00778	0.00778	<15.0	112	17.0	112	129	<4.99
SS05E	22	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS06C	16	03/15/2019	**18.8**	8.07	59.5	220	**306**	11,800	17,400	2,340	**29,200**	**31,500**	<4.96
SS06D	23	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	93.5	18.5	93.5	112	<4.95
SS08A	12	03/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SS08B	18	03/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	37.7	<15.0	37.7	37.7	<5.02
SW28	0 - 4.5	03/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
BH01A	17.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	45.1	<14.9	45.1	45.1	<5.00
BH01B	21	03/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	63.9	<15.0	63.9	63.9	11.2
BH01C	24	03/16/2019	<0.00201	<0.00201	0.00202	0.0166	0.0186	23.0	230	46.1	253	299	9.57
BH02	6.5	03/16/2019	<0.00200	<0.00200	<0.00200	0.00589	0.00589	<15.0	185	38.3	185	223	<5.03
BH02A	10	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
BH02B	11	03/16/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SW27	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.05
SW29	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	22.1	<15.0	22.1	22.1	<4.97
SW30	0 - 4.5	03/16/2019	<0.00199	0.00231	<0.00199	<0.00199	0.00231	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SW31	0 - 4.5	03/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	21.9	<15.0	21.9	21.9	<5.00
SW32	0 - 4.5	03/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	19.3	<14.9	19.3	19.3	<4.98
SW33	0 - 4.5	03/16/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	22.5	<15.0	22.5	22.5	<4.95
SW34	0 - 4.5	03/16/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	8.74
SW35	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	6.90
SW36	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03

TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT CVX JV RB 001H
REMEDIATION PERMIT NUMBER 2RP-5185
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)
SW37	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.02
SW38	0 - 4.5	03/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SW39	0 - 4.5	03/16/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	5.81
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000

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

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	NAB1901739559
District RP	2RP-5185
Facility ID	
Application ID	pAB1901733711

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Tyler Newton	Contact Telephone 575-361-1583
Contact email tyler_newton@xtoenergy.com	Incident # *(assigned by OCD)* NAB1901739559
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248211 Longitude -103.887081
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU CVX JV RB 001H	Site Type Pipeline ROW
Date Release Discovered 1-5-19	API# *(if applicable)* 30-015-40660

Unit Letter	Section	Township	Range	County
F	4	T24S	R30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 40.5	Volume Recovered (bbls) 1
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: A release was discovered from a 6" buried oil pipeline at the aforementioned GPS coordinates. The release orginated on the pipeline ROW and flowed west into the pasture. Preliminary findings point to internal corrosion in the 6 o'clock postion on a weld as the cause. A vac truck was dispatched to empty the remaining fluid in line, and was able to recover approximately 1 bbl from the surface. The line was clamped until further repairs can be made. Environmental contractor has been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1901739559
District RP	2RP-5185
Facility ID	
Application ID	pAB1901733711

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? The release was greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, on 1-6-19 at 11:20AM Bryan Foust sent a notification email to Mike Bratcher, Robert Hamlet, Jim Amos, Shelly Tucker, and Jim Griswold.

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: Tyler Newton Title: SHE Technician

Signature: Tyler Newton Date: 1-10-19

email: tyler_newton@xtoenergy.com Telephone: 575-361-1583

OCD Only

Received by: Amalia Barrameda Date: 1/17/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5185
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5185
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 04/03/2019

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5185
Facility ID	
Application ID	

Remediation Plan

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

- [x] Detailed description of proposed remediation technique
- [x] Scaled sitemap with GPS coordinates showing delineation points
- [x] Estimated volume of material to be remediated
- [x] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [x] 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: 04/03/2019

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

OCD Only

Received by: Date:

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: Date:

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 611185

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX RB 001H

21-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)

21-JAN-19

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

Reference: XENCO Report No(s): **611185**
PLU CVX RB 001H
Project Address: Eddy, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611185. 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. 611185 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 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	01-10-19 10:15	0.5 ft	611185-001
SS02	S	01-10-19 10:20	6 ft	611185-002
SS03	S	01-10-19 10:25	0.5 ft	611185-003
SS04	S	01-10-19 10:30	0.5 ft	611185-004
SS05	S	01-10-19 10:35	0.5 ft	611185-005
SS06	S	01-10-19 10:40	0.5 ft	611185-006
SS07	S	01-10-19 10:50	2 ft	611185-007
SS08	S	01-10-19 10:55	0.5 ft	611185-008
SS09	S	01-10-19 12:00	0.5 ft	611185-009

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075844 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3075858 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 610951-001 S,610951-001 SD,611185-002.

Batch: LBA-3076047 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 611185-001,611185-003,611185-007,611185-006,611185-004,611185-005,611185-009.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Dilution due to excessive hydrocarbons.

Batch: LBA-3076411 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7670004-1-BKS,7670004-1-BLK,7670004-1-BSD,611185-005,611185-004,611185-007,611185-003,611185-001,611185-006,611185-008,611185-009.
Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7670004-1-BLK,611185-001,611185-003,611185-009,611185-004,611185-007,611185-008,611185-006,611185-005.

Certificate of Analysis Summary 611185

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX RB 001H

Project Id:
Contact: Adrian Baker
Project Location: Eddy, NM

Date Received in Lab: Mon Jan-14-19 08:00 am
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611185-001		611185-002		611185-003		611185-004		611185-005		611185-006	
	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	
	Depth:	0.5- ft		6- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-10-19 10:15		Jan-10-19 10:20		Jan-10-19 10:25		Jan-10-19 10:30		Jan-10-19 10:35		Jan-10-19 10:40	
BTEX by EPA 8021B	***Extracted:***	Jan-16-19 12:00		Jan-15-19 08:30		Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00	
	Analyzed:	Jan-16-19 20:21		Jan-15-19 16:17		Jan-16-19 20:40		Jan-16-19 21:56		Jan-16-19 22:14		Jan-16-19 22:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		11.6	0.994	15.2	1.00	7.89	1.00	10.5	1.99	7.32	2.00	5.16	2.00
Toluene		55.3	0.994	63.6	1.00	45.1	1.00	63.4	1.99	46.7	2.00	39.3	2.00
Ethylbenzene		62.3	0.994	61.3	1.00	49.8	1.00	79.3	1.99	57.4	2.00	49.1	2.00
m,p-Xylenes		154	1.99	153	2.00	122	2.00	195	3.98	138	3.99	120	4.00
o-Xylene		26.5	0.994	21.8	1.00	21.5	1.00	32.8	1.99	25.4	2.00	23.7	2.00
Total Xylenes		181	0.994	175	1.00	144	1.00	228	1.99	163	2.00	144	2.00
Total BTEX		310	0.994	315	1.00	246	1.00	381	1.99	275	2.00	237	2.00
Inorganic Anions by EPA 300	***Extracted:***	Jan-17-19 08:30		Jan-15-19 10:30		Jan-17-19 08:30		Jan-17-19 08:30		Jan-17-19 08:30		Jan-17-19 08:30	
	Analyzed:	Jan-17-19 10:12		Jan-15-19 21:02		Jan-17-19 10:18		Jan-17-19 10:24		Jan-17-19 10:31		Jan-17-19 10:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.1	4.95	12.2	5.00	<4.95	4.95	<4.95	4.95	7.93	4.99	<4.98	4.98
TPH by SW8015 Mod	***Extracted:***	Jan-17-19 10:00		Jan-15-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00	
	Analyzed:	Jan-17-19 14:03		Jan-15-19 22:51		Jan-17-19 14:23		Jan-17-19 15:02		Jan-17-19 14:43		Jan-17-19 13:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		9150	150	10700	75.0	9660	150	12600	150	11100	150	10000	300
Diesel Range Organics (DRO)		10900	150	12100	75.0	12800	150	17200	150	15800	150	17000	300
Motor Oil Range Hydrocarbons (MRO)		697	150	750	75.0	888	150	1530	150	1310	150	1160	300
Total TPH		20700	150	23600	75.0	23300	150	31300	150	28200	150	28200	300

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 611185

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX RB 001H

Project Id:
Contact: Adrian Baker
Project Location: Eddy, NM

Date Received in Lab: Mon Jan-14-19 08:00 am
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	611185-007		611185-008		611185-009			
	Field Id:	SS07		SS08		SS09			
	Depth:	2- ft		0.5- ft		0.5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jan-10-19 10:50		Jan-10-19 10:55		Jan-10-19 12:00			
BTEX by EPA 8021B	***Extracted:***	Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00			
	Analyzed:	Jan-16-19 20:59		Jan-16-19 22:52		Jan-16-19 21:18			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		3.08	1.00	<10.1	10.1	4.79	1.00		
Toluene		30.9	1.00	67.6	10.1	31.9	1.00		
Ethylbenzene		37.5	1.00	<10.1	10.1	2.60	1.00		
m,p-Xylenes		90.6	2.00	218	20.2	69.5	2.00		
o-Xylene		18.4	1.00	48.5	10.1	20.7	1.00		
Total Xylenes		109	1.00	267	10.1	90.2	1.00		
Total BTEX		180	1.00	334	10.1	129	1.00		
Inorganic Anions by EPA 300	***Extracted:***	Jan-17-19 08:30		Jan-17-19 08:30		Jan-17-19 08:30			
	Analyzed:	Jan-17-19 11:07		Jan-17-19 11:28		Jan-17-19 11:34			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		<4.98	4.98	<4.98	4.98	7.06	4.96		
TPH by SW8015 Mod	***Extracted:***	Jan-17-19 10:00		Jan-17-19 10:00		Jan-17-19 10:00			
	Analyzed:	Jan-17-19 15:42		Jan-17-19 16:02		Jan-17-19 16:21			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		6780	300	14600	300	4030	150		
Diesel Range Organics (DRO)		9200	300	23500	300	4510	150		
Motor Oil Range Hydrocarbons (MRO)		543	300	1660	300	312	150		
Total TPH		16500	300	39800	300	8850	150		

Jessica Kramer
Project Assistant

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-001	Date Collected:	01.10.19 10.15	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.1**	4.95	mg/kg	01.17.19 10.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**9150**	150	mg/kg	01.17.19 14.03		10
Diesel Range Organics (DRO)	C10C28DRO	**10900**	150	mg/kg	01.17.19 14.03		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**697**	150	mg/kg	01.17.19 14.03		10
Total TPH	PHC635	**20700**	150	mg/kg	01.17.19 14.03		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	412	%	70-135	01.17.19 14.03	**
o-Terphenyl	84-15-1	496	%	70-135	01.17.19 14.03	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-001	Date Collected:	01.10.19 10.15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**11.6**	0.994	mg/kg	01.16.19 20.21		500
Toluene	108-88-3	**55.3**	0.994	mg/kg	01.16.19 20.21		500
Ethylbenzene	100-41-4	**62.3**	0.994	mg/kg	01.16.19 20.21		500
m,p-Xylenes	179601-23-1	**154**	1.99	mg/kg	01.16.19 20.21		500
o-Xylene	95-47-6	**26.5**	0.994	mg/kg	01.16.19 20.21		500
Total Xylenes	1330-20-7	**181**	0.994	mg/kg	01.16.19 20.21		500
Total BTEX		**310**	0.994	mg/kg	01.16.19 20.21		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	127	%	70-130	01.16.19 20.21	
4-Bromofluorobenzene	460-00-4	205	%	70-130	01.16.19 20.21	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-002	Date Collected:	01.10.19 10.20	Sample Depth:	6 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.15.19 10.30	Basis:	Wet Weight
Seq Number:	3075938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.2**	5.00	mg/kg	01.15.19 21.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.15.19 10.00	Basis:	Wet Weight
Seq Number:	3075858				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10700**	75.0	mg/kg	01.15.19 22.51		5
Diesel Range Organics (DRO)	C10C28DRO	**12100**	75.0	mg/kg	01.15.19 22.51		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**750**	75.0	mg/kg	01.15.19 22.51		5
Total TPH	PHC635	**23600**	75.0	mg/kg	01.15.19 22.51		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	490	%	70-135	01.15.19 22.51	**
o-Terphenyl	84-15-1	314	%	70-135	01.15.19 22.51	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-002	Date Collected:	01.10.19 10.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.15.19 08.30	Basis:	Wet Weight
Seq Number:	3075844				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**15.2**	1.00	mg/kg	01.15.19 16.17		500
Toluene	108-88-3	**63.6**	1.00	mg/kg	01.15.19 16.17		500
Ethylbenzene	100-41-4	**61.3**	1.00	mg/kg	01.15.19 16.17		500
m,p-Xylenes	179601-23-1	**153**	2.00	mg/kg	01.15.19 16.17		500
o-Xylene	95-47-6	**21.8**	1.00	mg/kg	01.15.19 16.17		500
Total Xylenes	1330-20-7	**175**	1.00	mg/kg	01.15.19 16.17		500
Total BTEX		**315**	1.00	mg/kg	01.15.19 16.17		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	01.15.19 16.17	
1,4-Difluorobenzene	540-36-3	127	%	70-130	01.15.19 16.17	

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-003	Date Collected:	01.10.19 10.25	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	01.17.19 10.18	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**9660**	150	mg/kg	01.17.19 14.23		10
Diesel Range Organics (DRO)	C10C28DRO	**12800**	150	mg/kg	01.17.19 14.23		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**888**	150	mg/kg	01.17.19 14.23		10
Total TPH	PHC635	**23300**	150	mg/kg	01.17.19 14.23		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	472	%	70-135	01.17.19 14.23	**
o-Terphenyl	84-15-1	336	%	70-135	01.17.19 14.23	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-003	Date Collected:	01.10.19 10.25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**7.89**	1.00	mg/kg	01.16.19 20.40		500
Toluene	108-88-3	**45.1**	1.00	mg/kg	01.16.19 20.40		500
Ethylbenzene	100-41-4	**49.8**	1.00	mg/kg	01.16.19 20.40		500
m,p-Xylenes	179601-23-1	**122**	2.00	mg/kg	01.16.19 20.40		500
o-Xylene	95-47-6	**21.5**	1.00	mg/kg	01.16.19 20.40		500
Total Xylenes	1330-20-7	**144**	1.00	mg/kg	01.16.19 20.40		500
Total BTEX		**246**	1.00	mg/kg	01.16.19 20.40		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	178	%	70-130	01.16.19 20.40	**
1,4-Difluorobenzene	540-36-3	123	%	70-130	01.16.19 20.40	

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-004	Date Collected:	01.10.19 10.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	01.17.19 10.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12600**	150	mg/kg	01.17.19 15.02		10
Diesel Range Organics (DRO)	C10C28DRO	**17200**	150	mg/kg	01.17.19 15.02		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1530**	150	mg/kg	01.17.19 15.02		10
Total TPH	PHC635	**31300**	150	mg/kg	01.17.19 15.02		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	617	%	70-135	01.17.19 15.02	**
o-Terphenyl	84-15-1	880	%	70-135	01.17.19 15.02	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-004	Date Collected:	01.10.19 10.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**10.5**	1.99	mg/kg	01.16.19 21.56		1000
Toluene	108-88-3	**63.4**	1.99	mg/kg	01.16.19 21.56		1000
Ethylbenzene	100-41-4	**79.3**	1.99	mg/kg	01.16.19 21.56		1000
m,p-Xylenes	179601-23-1	**195**	3.98	mg/kg	01.16.19 21.56		1000
o-Xylene	95-47-6	**32.8**	1.99	mg/kg	01.16.19 21.56		1000
Total Xylenes	1330-20-7	**228**	1.99	mg/kg	01.16.19 21.56		1000
Total BTEX		**381**	1.99	mg/kg	01.16.19 21.56		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.16.19 21.56	
4-Bromofluorobenzene	460-00-4	163	%	70-130	01.16.19 21.56	**

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-005	Date Collected:	01.10.19 10.35	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.93**	4.99	mg/kg	01.17.19 10.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**11100**	150	mg/kg	01.17.19 14.43		10
Diesel Range Organics (DRO)	C10C28DRO	**15800**	150	mg/kg	01.17.19 14.43		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1310**	150	mg/kg	01.17.19 14.43		10
Total TPH	PHC635	**28200**	150	mg/kg	01.17.19 14.43		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	562	%	70-135	01.17.19 14.43	**
o-Terphenyl	84-15-1	368	%	70-135	01.17.19 14.43	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-005	Date Collected:	01.10.19 10.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**7.32**	2.00	mg/kg	01.16.19 22.14		1000
Toluene	108-88-3	**46.7**	2.00	mg/kg	01.16.19 22.14		1000
Ethylbenzene	100-41-4	**57.4**	2.00	mg/kg	01.16.19 22.14		1000
m,p-Xylenes	179601-23-1	**138**	3.99	mg/kg	01.16.19 22.14		1000
o-Xylene	95-47-6	**25.4**	2.00	mg/kg	01.16.19 22.14		1000
Total Xylenes	1330-20-7	**163**	2.00	mg/kg	01.16.19 22.14		1000
Total BTEX		**275**	2.00	mg/kg	01.16.19 22.14		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	152	%	70-130	01.16.19 22.14	**
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.16.19 22.14	

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-006	Date Collected:	01.10.19 10.40	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.17.19 10.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10000**	300	mg/kg	01.17.19 13.43		20
Diesel Range Organics (DRO)	C10C28DRO	**17000**	300	mg/kg	01.17.19 13.43		20
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1160**	300	mg/kg	01.17.19 13.43		20
Total TPH	PHC635	**28200**	300	mg/kg	01.17.19 13.43		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	517	%	70-135	01.17.19 13.43	**
o-Terphenyl	84-15-1	702	%	70-135	01.17.19 13.43	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-006	Date Collected:	01.10.19 10.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**5.16**	2.00	mg/kg	01.16.19 22.33		1000
Toluene	108-88-3	**39.3**	2.00	mg/kg	01.16.19 22.33		1000
Ethylbenzene	100-41-4	**49.1**	2.00	mg/kg	01.16.19 22.33		1000
m,p-Xylenes	179601-23-1	**120**	4.00	mg/kg	01.16.19 22.33		1000
o-Xylene	95-47-6	**23.7**	2.00	mg/kg	01.16.19 22.33		1000
Total Xylenes	1330-20-7	**144**	2.00	mg/kg	01.16.19 22.33		1000
Total BTEX		**237**	2.00	mg/kg	01.16.19 22.33		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.16.19 22.33	
4-Bromofluorobenzene	460-00-4	150	%	70-130	01.16.19 22.33	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-007	Date Collected:	01.10.19 10.50	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.17.19 11.07	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**6780**	300	mg/kg	01.17.19 15.42		20
Diesel Range Organics (DRO)	C10C28DRO	**9200**	300	mg/kg	01.17.19 15.42		20
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**543**	300	mg/kg	01.17.19 15.42		20
Total TPH	PHC635	**16500**	300	mg/kg	01.17.19 15.42		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	340	%	70-135	01.17.19 15.42	**
o-Terphenyl	84-15-1	358	%	70-135	01.17.19 15.42	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-007	Date Collected:	01.10.19 10.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**3.08**	1.00	mg/kg	01.16.19 20.59		500
Toluene	108-88-3	**30.9**	1.00	mg/kg	01.16.19 20.59		500
Ethylbenzene	100-41-4	**37.5**	1.00	mg/kg	01.16.19 20.59		500
m,p-Xylenes	179601-23-1	**90.6**	2.00	mg/kg	01.16.19 20.59		500
o-Xylene	95-47-6	**18.4**	1.00	mg/kg	01.16.19 20.59		500
Total Xylenes	1330-20-7	**109**	1.00	mg/kg	01.16.19 20.59		500
Total BTEX		**180**	1.00	mg/kg	01.16.19 20.59		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.16.19 20.59	
4-Bromofluorobenzene	460-00-4	173	%	70-130	01.16.19 20.59	**

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-008	Date Collected:	01.10.19 10.55	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.17.19 11.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**14600**	300	mg/kg	01.17.19 16.02		20
Diesel Range Organics (DRO)	C10C28DRO	**23500**	300	mg/kg	01.17.19 16.02		20
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1660**	300	mg/kg	01.17.19 16.02		20
Total TPH	PHC635	**39800**	300	mg/kg	01.17.19 16.02		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	805	%	70-135	01.17.19 16.02	**
o-Terphenyl	84-15-1	462	%	70-135	01.17.19 16.02	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-008	Date Collected:	01.10.19 10.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<10.1	10.1	mg/kg	01.16.19 22.52	U	5000
Toluene	108-88-3	**67.6**	10.1	mg/kg	01.16.19 22.52		5000
Ethylbenzene	100-41-4	<10.1	10.1	mg/kg	01.16.19 22.52	U	5000
m,p-Xylenes	179601-23-1	**218**	20.2	mg/kg	01.16.19 22.52		5000
o-Xylene	95-47-6	**48.5**	10.1	mg/kg	01.16.19 22.52		5000
Total Xylenes	1330-20-7	**267**	10.1	mg/kg	01.16.19 22.52		5000
Total BTEX		**334**	10.1	mg/kg	01.16.19 22.52		5000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.16.19 22.52	
4-Bromofluorobenzene	460-00-4	125	%	70-130	01.16.19 22.52	

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-009	Date Collected:	01.10.19 12.00	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.17.19 08.30	Basis:	Wet Weight
Seq Number:	3076261				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.06**	4.96	mg/kg	01.17.19 11.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.17.19 10.00	Basis:	Wet Weight
Seq Number:	3076411				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4030**	150	mg/kg	01.17.19 16.21		10
Diesel Range Organics (DRO)	C10C28DRO	**4510**	150	mg/kg	01.17.19 16.21		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**312**	150	mg/kg	01.17.19 16.21		10
Total TPH	PHC635	**8850**	150	mg/kg	01.17.19 16.21		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	200	%	70-135	01.17.19 16.21	**
o-Terphenyl	84-15-1	216	%	70-135	01.17.19 16.21	**

Certificate of Analytical Results 611185

LT Environmental, Inc., Arvada, CO

PLU CVX RB 001H

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	01.14.19 08.00
Lab Sample Id:	611185-009	Date Collected:	01.10.19 12.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**4.79**	1.00	mg/kg	01.16.19 21.18		500
Toluene	108-88-3	**31.9**	1.00	mg/kg	01.16.19 21.18		500
Ethylbenzene	100-41-4	**2.60**	1.00	mg/kg	01.16.19 21.18		500
m,p-Xylenes	179601-23-1	**69.5**	2.00	mg/kg	01.16.19 21.18		500
o-Xylene	95-47-6	**20.7**	1.00	mg/kg	01.16.19 21.18		500
Total Xylenes	1330-20-7	**90.2**	1.00	mg/kg	01.16.19 21.18		500
Total BTEX		**129**	1.00	mg/kg	01.16.19 21.18		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	118	%	70-130	01.16.19 21.18	
4-Bromofluorobenzene	460-00-4	153	%	70-130	01.16.19 21.18	**

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 611185

LT Environmental, Inc.

PLU CVX RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075938 Matrix: Solid Date Prep: 01.15.19
MB Sample Id: 7669759-1-BLK LCS Sample Id: 7669759-1-BKS LCSD Sample Id: 7669759-1-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	253	101	242	97	90-110	4	20	mg/kg	01.15.19 20:50	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076261 Matrix: Solid Date Prep: 01.17.19
MB Sample Id: 7669869-1-BLK LCS Sample Id: 7669869-1-BKS LCSD Sample Id: 7669869-1-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	233	93	243	97	90-110	4	20	mg/kg	01.17.19 08:49	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075938 Matrix: Soil Date Prep: 01.15.19
Parent Sample Id: 611062-008 MS Sample Id: 611062-008 S MSD Sample Id: 611062-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	272	248	487	87	507	95	90-110	4	20	mg/kg	01.15.19 22:38	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3075938 Matrix: Soil Date Prep: 01.15.19
Parent Sample Id: 611185-002 MS Sample Id: 611185-002 S MSD Sample Id: 611185-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.2	250	242	92	279	107	90-110	14	20	mg/kg	01.15.19 21:09	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076261 Matrix: Soil Date Prep: 01.17.19
Parent Sample Id: 611184-001 MS Sample Id: 611184-001 S MSD Sample Id: 611184-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	564	250	772	83	769	82	90-110	0	20	mg/kg	01.17.19 09:07	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 611185

LT Environmental, Inc.

PLU CVX RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3076261 Matrix: Soil Date Prep: 01.17.19
Parent Sample Id: 611185-005 MS Sample Id: 611185-005 S MSD Sample Id: 611185-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.93	250	247	96	239	92	90-110	3	20	mg/kg	01.17.19 10:37	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075858 Matrix: Solid Date Prep: 01.15.19
MB Sample Id: 7669780-1-BLK LCS Sample Id: 7669780-1-BKS LCSD Sample Id: 7669780-1-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	701	70	771	77	70-135	10	20	mg/kg	01.15.19 12:50	
Diesel Range Organics (DRO)	<8.13	1000	804	80	902	90	70-135	11	20	mg/kg	01.15.19 12:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		98		109		70-135	%	01.15.19 12:50
o-Terphenyl	112		94		105		70-135	%	01.15.19 12:50

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076411 Matrix: Solid Date Prep: 01.17.19
MB Sample Id: 7670004-1-BLK LCS Sample Id: 7670004-1-BKS LCSD Sample Id: 7670004-1-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	1140	114	1110	111	70-135	3	20	mg/kg	01.17.19 08:45	
Diesel Range Organics (DRO)	<8.13	1000	1230	123	1270	127	70-135	3	20	mg/kg	01.17.19 08:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	139	**	148	**	143	**	70-135	%	01.17.19 08:45
o-Terphenyl	144	**	131		128		70-135	%	01.17.19 08:45

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3075858 Matrix: Soil Date Prep: 01.15.19
Parent Sample Id: 610951-001 MS Sample Id: 610951-001 S MSD Sample Id: 610951-001 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	2130	213	2100	210	70-135	1	20	mg/kg	01.15.19 14:53	X
Diesel Range Organics (DRO)	<8.13	1000	2320	232	2300	230	70-135	1	20	mg/kg	01.15.19 14:53	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	197	**	197	**	70-135	%	01.15.19 14:53
o-Terphenyl	202	**	196	**	70-135	%	01.15.19 14:53

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 611185

LT Environmental, Inc.

PLU CVX RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076411 Matrix: Soil Date Prep: 01.17.19
Parent Sample Id: 611129-018 MS Sample Id: 611129-018 S MSD Sample Id: 611129-018 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	823	82	814	81	70-135	1	20	mg/kg	01.17.19 09:44	
Diesel Range Organics (DRO)	<8.13	1000	908	91	906	91	70-135	0	20	mg/kg	01.17.19 09:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		122		70-135	%	01.17.19 09:44
o-Terphenyl	120		100		70-135	%	01.17.19 09:44

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3075844 Matrix: Solid Date Prep: 01.15.19
MB Sample Id: 7669773-1-BLK LCS Sample Id: 7669773-1-BKS LCSD Sample Id: 7669773-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0978	98	0.106	106	70-130	8	35	mg/kg	01.15.19 10:19	
Toluene	<0.000455	0.0998	0.0953	95	0.102	102	70-130	7	35	mg/kg	01.15.19 10:19	
Ethylbenzene	<0.000564	0.0998	0.0931	93	0.0996	100	70-130	7	35	mg/kg	01.15.19 10:19	
m,p-Xylenes	<0.00399	0.200	0.185	93	0.197	99	70-130	6	35	mg/kg	01.15.19 10:19	
o-Xylene	<0.000344	0.0998	0.0918	92	0.0982	98	70-130	7	35	mg/kg	01.15.19 10:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		103		70-130	%	01.15.19 10:19
4-Bromofluorobenzene	81		97		95		70-130	%	01.15.19 10:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3076047 Matrix: Solid Date Prep: 01.16.19
MB Sample Id: 7669891-1-BLK LCS Sample Id: 7669891-1-BKS LCSD Sample Id: 7669891-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.104	103	0.101	101	70-130	3	35	mg/kg	01.16.19 14:04	
Toluene	<0.000458	0.101	0.101	100	0.0975	98	70-130	4	35	mg/kg	01.16.19 14:04	
Ethylbenzene	<0.000568	0.101	0.0982	97	0.0949	95	70-130	3	35	mg/kg	01.16.19 14:04	
m,p-Xylenes	<0.00102	0.201	0.195	97	0.188	94	70-130	4	35	mg/kg	01.16.19 14:04	
o-Xylene	<0.000346	0.101	0.0986	98	0.0956	96	70-130	3	35	mg/kg	01.16.19 14:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		103		70-130	%	01.16.19 14:04
4-Bromofluorobenzene	90		95		94		70-130	%	01.16.19 14:04

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 611185

LT Environmental, Inc.

PLU CVX RB 001H

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

Seq Number: 3075844 Matrix: Soil Date Prep: 01.15.19

Parent Sample Id: 611282-001 MS Sample Id: 611282-001 S MSD Sample Id: 611282-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000428	0.0996	0.0915	91	0.0860	86	70-130	6	35	mg/kg	01.15.19 10:57	
Toluene	<0.000454	0.0996	0.0898	90	0.0819	82	70-130	9	35	mg/kg	01.15.19 10:57	
Ethylbenzene	<0.000563	0.0996	0.0835	84	0.0728	73	70-130	14	35	mg/kg	01.15.19 10:57	
m,p-Xylenes	0.00172	0.199	0.166	83	0.143	71	70-130	15	35	mg/kg	01.15.19 10:57	
o-Xylene	<0.000343	0.0996	0.0825	83	0.0720	72	70-130	14	35	mg/kg	01.15.19 10:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	01.15.19 10:57
4-Bromofluorobenzene	98		95		70-130	%	01.15.19 10:57

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

Seq Number: 3076047 Matrix: Soil Date Prep: 01.16.19

Parent Sample Id: 611241-001 MS Sample Id: 611241-001 S MSD Sample Id: 611241-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00185	0.200	0.0978	48	0.0964	47	70-130	1	35	mg/kg	01.16.19 14:42	X
Toluene	<0.000911	0.200	0.0829	41	0.0794	40	70-130	4	35	mg/kg	01.16.19 14:42	X
Ethylbenzene	<0.00113	0.200	0.0687	34	0.0660	33	70-130	4	35	mg/kg	01.16.19 14:42	X
m,p-Xylenes	<0.00203	0.400	0.139	35	0.134	34	70-130	4	35	mg/kg	01.16.19 14:42	X
o-Xylene	<0.000689	0.200	0.0698	35	0.0671	34	70-130	4	35	mg/kg	01.16.19 14:42	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	01.16.19 14:42
4-Bromofluorobenzene	101		104		70-130	%	01.16.19 14:42

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

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, Texas (281-240-4200)
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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 611185

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. Permian office
Company Address: 3300 N "A" St. Midland, TX 79705
Email: abaker@ltenv.com
Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Lynde Lambert

Project Information

Project Name/Number: RU CUX RB 100H
Project Location: Eddy, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number:

Analytical Information

TPH 8015 EPA
BTEX (EPA 8021)
Chloride 300.0

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	Field Comments
1	SS01	0.5'	01/10/19	10:15	S	1								X	
2	SS02	6'		10:20	S	1								X	
3	SS03	0.5'		10:25	S	1								X	
4	SS04	0.5'		10:30	S	1								X	
5	SS05	0.5'		10:35	S	1								X	
6	SS06	0.5'		10:40	S	1								X	
7	SS07	2'		11:50	S	1								X	
8	SS08	0.5'		11:55	S	1								X	
9	SS09	0.5'		12:00	S	1								X	
10															

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking # 7741 7741 5134

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		01/10/19 16:20	Timothy P. Elliott	Paul K Lacy	1/11/19 1530	Received By: 2 Katelyn 1/14/19 0800
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 4.9/4.8 Thermo. Corr. Factor RS -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.

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: 01/14/2019 08:00:00 AM

Work Order #: 611185

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#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: 01/14/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/14/2019

Jessica Kramer

Analytical Report 616899

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU-CVX-JV-RB-001H (01052019

012919007

08-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

08-MAR-19

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

Reference: XENCO Report No(s): **616899**
PLU-CVX-JV-RB-001H (01052019
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) 616899. 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. 616899 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 616899

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS04A	S	03-01-19 10:32	6	616899-001
SS04B	S	03-01-19 10:37	11	616899-002
SS05A	S	03-01-19 11:26	4	616899-003
SS05B	S	03-01-19 11:42	14	616899-004
SS06A	S	03-01-19 12:42	4	616899-005
SS06B	S	03-01-19 13:15	16	616899-006
SS03A	S	03-04-19 10:35	2	616899-007
SS03B	S	03-04-19 11:02	16	616899-008

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081522 Inorganic Anions by EPA 300
Lab Sample ID 616899-002 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: 616899-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3081570 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; data confirmed by re-analysis.
Samples affected are: 616899-004,616899-005,616899-007,616899-003,616899-006.

Batch: LBA-3081581 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 616899-007.

Certificate of Analysis Summary 616899

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB-001H (01052019

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:36 am
Report Date: 08-MAR-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	616899-001		616899-002		616899-003		616899-004		616899-005		616899-006	
	Field Id:	SS04A		SS04B		SS05A		SS05B		SS06A		SS06B	
	Depth:	6-		11-		4-		14-		4-		16-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-01-19 10:32		Mar-01-19 10:37		Mar-01-19 11:26		Mar-01-19 11:42		Mar-01-19 12:42		Mar-01-19 13:15	
BTEX by EPA 8021B	***Extracted:***	Mar-07-19 12:00		Mar-07-19 12:00		Mar-07-19 12:00		Mar-07-19 12:00		Mar-07-19 12:00		Mar-07-19 12:00	
	Analyzed:	Mar-08-19 04:08		Mar-08-19 04:27		Mar-08-19 04:46		Mar-08-19 08:12		Mar-08-19 11:40		Mar-08-19 09:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00353	0.00200	<0.00201	0.00201	0.00578	0.00201	0.0152	0.00200	1.80	0.202	0.0609	0.00994
Toluene		0.0816	0.00200	<0.00201	0.00201	0.180	0.00201	0.293	0.00200	19.7	0.202	1.48	0.00994
Ethylbenzene		0.0206	0.00200	0.00230	0.00201	0.0622	0.00201	0.0438	0.00200	22.2	0.202	0.382	0.00994
m,p-Xylenes		0.311	0.00399	0.00631	0.00402	0.106	0.00402	0.879 D	0.0400	59.4	0.403	0.713	0.0199
o-Xylene		0.120	0.00200	<0.00201	0.00201	0.362	0.00201	0.360	0.00200	9.95	0.202	1.42	0.00994
Total Xylenes		0.431	0.00200	0.00631	0.00201	0.468	0.00201	1.24	0.00200	69.4	0.202	2.13	0.00994
Total BTEX		0.537	0.00200	0.00861	0.00201	0.716	0.00201	1.59	0.00200	113	0.202	4.06	0.00994
Inorganic Anions by EPA 300	***Extracted:***	Mar-07-19 14:00		Mar-07-19 14:00		Mar-07-19 14:00		Mar-07-19 14:00		Mar-07-19 14:00		Mar-07-19 14:00	
	Analyzed:	Mar-07-19 23:49		Mar-07-19 23:17		Mar-08-19 00:10		Mar-08-19 00:42		Mar-08-19 00:52		Mar-08-19 01:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.98	4.98	<5.00	5.00	<4.96	4.96	<4.99	4.99	<4.95	4.95	<4.95	4.95
TPH by SW8015 Mod	***Extracted:***	Mar-07-19 17:00		Mar-07-19 17:00		Mar-07-19 17:00		Mar-07-19 17:00		Mar-07-19 17:00		Mar-07-19 17:00	
	Analyzed:	Mar-08-19 00:53		Mar-08-19 01:13		Mar-08-19 01:32		Mar-08-19 02:32		Mar-08-19 02:52		Mar-08-19 03:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		149	15.0	<14.9	14.9	344	15.0	667	15.0	3850	74.9	421	15.0
Diesel Range Organics (DRO)		1230	15.0	<14.9	14.9	2100	15.0	3230	15.0	7880	74.9	1720	15.0
Motor Oil Range Hydrocarbons (MRO)		118	15.0	<14.9	14.9	175	15.0	212	15.0	551	74.9	123	15.0
Total TPH		1500	15.0	<14.9	14.9	2620	15.0	4110	15.0	12300	74.9	2260	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 616899

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB-001H (01052019

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:36 am
Report Date: 08-MAR-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	616899-007		616899-008					
	Field Id:	SS03A		SS03B					
	Depth:	2-		16-					
	Matrix:	SOIL		SOIL					
	Sampled:	Mar-04-19 10:35		Mar-04-19 11:02					
BTEX by EPA 8021B	***Extracted:***	Mar-07-19 12:00		Mar-07-19 12:00					
	Analyzed:	Mar-08-19 13:33		Mar-08-19 08:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		1.69	0.199	<0.00200	0.00200				
Toluene		18.3	0.199	<0.00200	0.00200				
Ethylbenzene		23.1	0.199	0.00272	0.00200				
m,p-Xylenes		62.4	0.398	0.00819	0.00400				
o-Xylene		8.39	0.199	<0.00200	0.00200				
Total Xylenes		70.8	0.199	0.00819	0.00200				
Total BTEX		114	0.199	0.0109	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Mar-07-19 14:00		Mar-07-19 14:00					
	Analyzed:	Mar-08-19 01:14		Mar-08-19 01:24					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<4.95	4.95	<4.95	4.95				
TPH by SW8015 Mod	***Extracted:***	Mar-07-19 17:00		Mar-07-19 17:00					
	Analyzed:	Mar-08-19 03:32		Mar-08-19 03:52					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		2820	74.8	<14.9	14.9				
Diesel Range Organics (DRO)		5730	74.8	<14.9	14.9				
Motor Oil Range Hydrocarbons (MRO)		426	74.8	<14.9	14.9				
Total TPH		8980	74.8	<14.9	14.9				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 616899

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-001	Date Collected:	03.01.19 10.32	Sample Depth:	6

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.07.19 23.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**149**	15.0	mg/kg	03.08.19 00.53		1
Diesel Range Organics (DRO)	C10C28DRO	**1230**	15.0	mg/kg	03.08.19 00.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**118**	15.0	mg/kg	03.08.19 00.53		1
Total TPH	PHC635	**1500**	15.0	mg/kg	03.08.19 00.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.08.19 00.53	
o-Terphenyl	84-15-1	117	%	70-135	03.08.19 00.53	

Certificate of Analytical Results 616899

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-001	Date Collected:	03.01.19 10.32	Sample Depth:	6
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00353**	0.00200	mg/kg	03.08.19 04.08		1
Toluene	108-88-3	**0.0816**	0.00200	mg/kg	03.08.19 04.08		1
Ethylbenzene	100-41-4	**0.0206**	0.00200	mg/kg	03.08.19 04.08		1
m,p-Xylenes	179601-23-1	**0.311**	0.00399	mg/kg	03.08.19 04.08		1
o-Xylene	95-47-6	**0.120**	0.00200	mg/kg	03.08.19 04.08		1
Total Xylenes	1330-20-7	**0.431**	0.00200	mg/kg	03.08.19 04.08		1
Total BTEX		**0.537**	0.00200	mg/kg	03.08.19 04.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.08.19 04.08	
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.08.19 04.08	

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id: **SS04B** Matrix: Soil Date Received:03.07.19 11.36
Lab Sample Id: 616899-002 Date Collected: 03.01.19 10.37 Sample Depth: 11

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 03.07.19 14.00 Basis: Wet Weight
Seq Number: 3081522

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.07.19 23.17	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 03.07.19 17.00 Basis: Wet Weight
Seq Number: 3081581

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.08.19 01.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.08.19 01.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.08.19 01.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.08.19 01.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.08.19 01.13	
o-Terphenyl	84-15-1	91	%	70-135	03.08.19 01.13	

Certificate of Analytical Results 616899

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS04B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-002	Date Collected:	03.01.19 10.37	Sample Depth:	11
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.08.19 04.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.08.19 04.27	U	1
Ethylbenzene	100-41-4	**0.00230**	0.00201	mg/kg	03.08.19 04.27		1
m,p-Xylenes	179601-23-1	**0.00631**	0.00402	mg/kg	03.08.19 04.27		1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.08.19 04.27	U	1
Total Xylenes	1330-20-7	**0.00631**	0.00201	mg/kg	03.08.19 04.27		1
Total BTEX		**0.00861**	0.00201	mg/kg	03.08.19 04.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.08.19 04.27	
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.08.19 04.27	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-003	Date Collected:	03.01.19 11.26	Sample Depth:	4

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.08.19 00.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**344**	15.0	mg/kg	03.08.19 01.32		1
Diesel Range Organics (DRO)	C10C28DRO	**2100**	15.0	mg/kg	03.08.19 01.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**175**	15.0	mg/kg	03.08.19 01.32		1
Total TPH	PHC635	**2620**	15.0	mg/kg	03.08.19 01.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	03.08.19 01.32	
o-Terphenyl	84-15-1	124	%	70-135	03.08.19 01.32	

Certificate of Analytical Results 616899

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-003	Date Collected:	03.01.19 11.26	Sample Depth:	4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00578**	0.00201	mg/kg	03.08.19 04.46		1
Toluene	108-88-3	**0.180**	0.00201	mg/kg	03.08.19 04.46		1
Ethylbenzene	100-41-4	**0.0622**	0.00201	mg/kg	03.08.19 04.46		1
m,p-Xylenes	179601-23-1	**0.106**	0.00402	mg/kg	03.08.19 04.46		1
o-Xylene	95-47-6	**0.362**	0.00201	mg/kg	03.08.19 04.46		1
Total Xylenes	1330-20-7	**0.468**	0.00201	mg/kg	03.08.19 04.46		1
Total BTEX		**0.716**	0.00201	mg/kg	03.08.19 04.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.08.19 04.46	
4-Bromofluorobenzene	460-00-4	271	%	70-130	03.08.19 04.46	**

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS05B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-004	Date Collected:	03.01.19 11.42	Sample Depth:	14

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.08.19 00.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**667**	15.0	mg/kg	03.08.19 02.32		1
Diesel Range Organics (DRO)	C10C28DRO	**3230**	15.0	mg/kg	03.08.19 02.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**212**	15.0	mg/kg	03.08.19 02.32		1
Total TPH	PHC635	**4110**	15.0	mg/kg	03.08.19 02.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	03.08.19 02.32	
o-Terphenyl	84-15-1	130	%	70-135	03.08.19 02.32	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS05B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-004	Date Collected:	03.01.19 11.42	Sample Depth:	14
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0152**	0.00200	mg/kg	03.08.19 08.12		1
Toluene	108-88-3	**0.293**	0.00200	mg/kg	03.08.19 08.12		1
Ethylbenzene	100-41-4	**0.0438**	0.00200	mg/kg	03.08.19 08.12		1
m,p-Xylenes	179601-23-1	**0.879**	0.0400	mg/kg	03.08.19 10.43	D	10
o-Xylene	95-47-6	**0.360**	0.00200	mg/kg	03.08.19 08.12		1
Total Xylenes	1330-20-7	**1.24**	0.00200	mg/kg	03.08.19 10.43		10
Total BTEX		**1.59**	0.00200	mg/kg	03.08.19 10.43		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	121	%	70-130	03.08.19 08.12	
4-Bromofluorobenzene	460-00-4	205	%	70-130	03.08.19 08.12	**

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS06A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-005	Date Collected:	03.01.19 12.42	Sample Depth:	4

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.19 00.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3850**	74.9	mg/kg	03.08.19 02.52		5
Diesel Range Organics (DRO)	C10C28DRO	**7880**	74.9	mg/kg	03.08.19 02.52		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**551**	74.9	mg/kg	03.08.19 02.52		5
Total TPH	PHC635	**12300**	74.9	mg/kg	03.08.19 02.52		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	03.08.19 02.52	
o-Terphenyl	84-15-1	94	%	70-135	03.08.19 02.52	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS06A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-005	Date Collected:	03.01.19 12.42	Sample Depth:	4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.80**	0.202	mg/kg	03.08.19 11.40		100
Toluene	108-88-3	**19.7**	0.202	mg/kg	03.08.19 11.40		100
Ethylbenzene	100-41-4	**22.2**	0.202	mg/kg	03.08.19 11.40		100
m,p-Xylenes	179601-23-1	**59.4**	0.403	mg/kg	03.08.19 11.40		100
o-Xylene	95-47-6	**9.95**	0.202	mg/kg	03.08.19 11.40		100
Total Xylenes	1330-20-7	**69.4**	0.202	mg/kg	03.08.19 11.40		100
Total BTEX		**113**	0.202	mg/kg	03.08.19 11.40		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	260	%	70-130	03.08.19 11.40	**
1,4-Difluorobenzene	540-36-3	127	%	70-130	03.08.19 11.40	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS06B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-006	Date Collected:	03.01.19 13.15	Sample Depth:	16

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.19 01.03	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**421**	15.0	mg/kg	03.08.19 03.12		1
Diesel Range Organics (DRO)	C10C28DRO	**1720**	15.0	mg/kg	03.08.19 03.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**123**	15.0	mg/kg	03.08.19 03.12		1
Total TPH	PHC635	**2260**	15.0	mg/kg	03.08.19 03.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.08.19 03.12	
o-Terphenyl	84-15-1	120	%	70-135	03.08.19 03.12	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS06B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-006	Date Collected:	03.01.19 13.15	Sample Depth:	16
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0609**	0.00994	mg/kg	03.08.19 09.28		5
Toluene	108-88-3	**1.48**	0.00994	mg/kg	03.08.19 09.28		5
Ethylbenzene	100-41-4	**0.382**	0.00994	mg/kg	03.08.19 09.28		5
m,p-Xylenes	179601-23-1	**0.713**	0.0199	mg/kg	03.08.19 09.28		5
o-Xylene	95-47-6	**1.42**	0.00994	mg/kg	03.08.19 09.28		5
Total Xylenes	1330-20-7	**2.13**	0.00994	mg/kg	03.08.19 09.28		5
Total BTEX		**4.06**	0.00994	mg/kg	03.08.19 09.28		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	196	%	70-130	03.08.19 09.28	**
1,4-Difluorobenzene	540-36-3	127	%	70-130	03.08.19 09.28	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-007	Date Collected:	03.04.19 10.35	Sample Depth:	2

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.19 01.14	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2820**	74.8	mg/kg	03.08.19 03.32		5
Diesel Range Organics (DRO)	C10C28DRO	**5730**	74.8	mg/kg	03.08.19 03.32		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**426**	74.8	mg/kg	03.08.19 03.32		5
Total TPH	PHC635	**8980**	74.8	mg/kg	03.08.19 03.32		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	03.08.19 03.32	
o-Terphenyl	84-15-1	63	%	70-135	03.08.19 03.32	***

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-007	Date Collected:	03.04.19 10.35	Sample Depth:	2
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.69**	0.199	mg/kg	03.08.19 13.33		100
Toluene	108-88-3	**18.3**	0.199	mg/kg	03.08.19 13.33		100
Ethylbenzene	100-41-4	**23.1**	0.199	mg/kg	03.08.19 13.33		100
m,p-Xylenes	179601-23-1	**62.4**	0.398	mg/kg	03.08.19 13.33		100
o-Xylene	95-47-6	**8.39**	0.199	mg/kg	03.08.19 13.33		100
Total Xylenes	1330-20-7	**70.8**	0.199	mg/kg	03.08.19 13.33		100
Total BTEX		**114**	0.199	mg/kg	03.08.19 13.33		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	125	%	70-130	03.08.19 13.33	
4-Bromofluorobenzene	460-00-4	233	%	70-130	03.08.19 13.33	**

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-008	Date Collected:	03.04.19 11.02	Sample Depth:	16

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.19 01.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.08.19 03.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.08.19 03.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.08.19 03.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.08.19 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.08.19 03.52	
o-Terphenyl	84-15-1	95	%	70-135	03.08.19 03.52	

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LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB-001H (01052019

Sample Id:	**SS03B**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616899-008	Date Collected:	03.04.19 11.02	Sample Depth:	16
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.08.19 08.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.08.19 08.31	U	1
Ethylbenzene	100-41-4	**0.00272**	0.00200	mg/kg	03.08.19 08.31		1
m,p-Xylenes	179601-23-1	**0.00819**	0.00400	mg/kg	03.08.19 08.31		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.08.19 08.31	U	1
Total Xylenes	1330-20-7	**0.00819**	0.00200	mg/kg	03.08.19 08.31		1
Total BTEX		**0.0109**	0.00200	mg/kg	03.08.19 08.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.08.19 08.31	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.08.19 08.31	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 616899

LT Environmental, Inc.

PLU-CVX-JV-RB-001H (01052019

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673144-1-BLK LCS Sample Id: 7673144-1-BKS LCSD Sample Id: 7673144-1-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	267	107	266	106	90-110	0	20	mg/kg	03.07.19 22:55	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-002 MS Sample Id: 616897-002 S MSD Sample Id: 616897-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	250	454	102	456	102	90-110	0	20	mg/kg	03.08.19 01:56	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616899-002 MS Sample Id: 616899-002 S MSD Sample Id: 616899-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.54	250	286	114	264	105	90-110	8	20	mg/kg	03.07.19 23:27	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673224-1-BLK LCS Sample Id: 7673224-1-BKS LCSD Sample Id: 7673224-1-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	978	98	967	97	70-135	1	20	mg/kg	03.07.19 21:15	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	970	97	70-135	3	20	mg/kg	03.07.19 21:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		125		70-135	%	03.07.19 21:15
o-Terphenyl	94		118		120		70-135	%	03.07.19 21:15

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 616899

LT Environmental, Inc.

PLU-CVX-JV-RB-001H (01052019

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 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	941	94	944	95	70-135	0	20	mg/kg	03.07.19 22:15	
Diesel Range Organics (DRO)	9.72	999	956	95	949	94	70-135	1	20	mg/kg	03.07.19 22:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	03.07.19 22:15
o-Terphenyl	112		110		70-135	%	03.07.19 22:15

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673226-1-BLK LCS Sample Id: 7673226-1-BKS LCSD Sample Id: 7673226-1-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	0.0907	90	0.0932	93	70-130	3	35	mg/kg	03.08.19 00:41	
Toluene	<0.000458	0.101	0.0817	81	0.0847	85	70-130	4	35	mg/kg	03.08.19 00:41	
Ethylbenzene	<0.000568	0.101	0.0795	79	0.0828	83	70-130	4	35	mg/kg	03.08.19 00:41	
m,p-Xylenes	<0.00102	0.201	0.161	80	0.167	84	70-130	4	35	mg/kg	03.08.19 00:41	
o-Xylene	<0.000346	0.101	0.0800	79	0.0834	83	70-130	4	35	mg/kg	03.08.19 00:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		105		70-130	%	03.08.19 00:41
4-Bromofluorobenzene	100		96		98		70-130	%	03.08.19 00:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0984	99	0.0991	99	70-130	1	35	mg/kg	03.08.19 01:19	
Toluene	<0.00199	0.0994	0.0869	87	0.0884	89	70-130	2	35	mg/kg	03.08.19 01:19	
Ethylbenzene	<0.000561	0.0994	0.0817	82	0.0835	84	70-130	2	35	mg/kg	03.08.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.164	82	0.168	84	70-130	2	35	mg/kg	03.08.19 01:19	
o-Xylene	<0.000342	0.0994	0.0811	82	0.0833	83	70-130	3	35	mg/kg	03.08.19 01:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.08.19 01:19
4-Bromofluorobenzene	100		101		70-130	%	03.08.19 01:19

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 616989 9

Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com; mwills@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-CVX-JV-RB 001H (01052019)	Turn Around	
Project Number:	012919007	~~Routine~~ ☐	
P.O. Number:	2RP-5185	Rush:	
Sampler's Name:	Martin Wills	Due Date:3/7/219	

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)
SS04A	S	3/1/2019	1032	6	1	X	X	X
SS04B	S	3/1/2019	1037	11	1	X	X	X
SS05A	S	3/1/2019	1126	4	1	X	X	X
SS05B	S	3/1/2019	1142	14	1	X	X	X
SS06A	S	3/1/2019	1242	4	1	X	X	X
SS06B	S	3/1/2019	1315	16	1	X	X	X
SS03A	S	3/4/2019	1035	2	1	X	X	X
SS03B	S	3/4/2019	1102	16	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		3/6 9:00 AM	2		3/7/19 1136
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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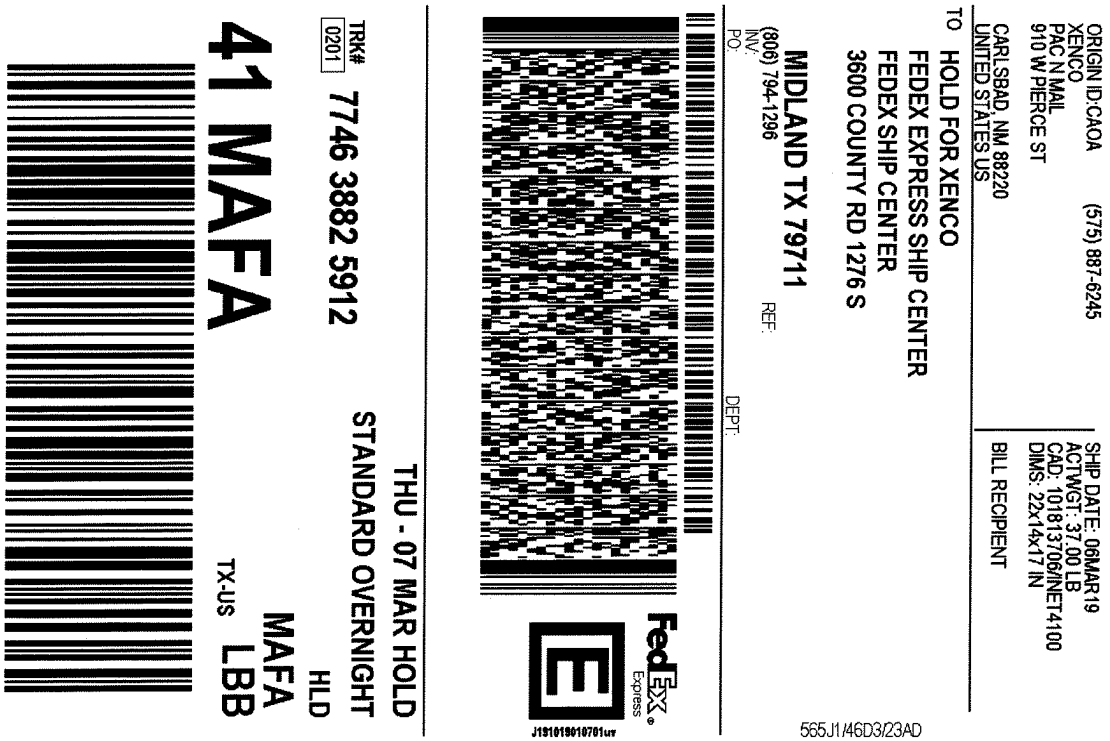


After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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: 03/07/2019 11:36:00 AM

Work Order #: 616899

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: 03/07/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/07/2019

Jessica Kramer

Analytical Report 616900

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU-CVX-JV-RB #001H (0152019)

012919007

08-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

08-MAR-19

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

Reference: XENCO Report No(s): **616900**
PLU-CVX-JV-RB #001H (0152019)
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) 616900. 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. 616900 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 616900

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (0152019)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	03-04-19 12:46	0 - 4.5	616900-001
SW02	S	03-04-19 12:48	0 - 4.5	616900-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081570 BTEX by EPA 8021B

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

Certificate of Analysis Summary 616900

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (0152019)

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:36 am
Report Date: 08-MAR-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	616900-001		616900-002					
	Field Id:	SW01		SW02					
	Depth:	0-4.5		0-4.5					
	Matrix:	SOIL		SOIL					
	Sampled:	Mar-04-19 12:46		Mar-04-19 12:48					
BTEX by EPA 8021B	***Extracted:***	Mar-07-19 12:00		Mar-07-19 12:00					
	Analyzed:	Mar-08-19 06:56		Mar-08-19 07:15					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199				
Toluene		<0.00201	0.00201	<0.00199	0.00199				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Mar-07-19 14:00		Mar-07-19 14:00					
	Analyzed:	Mar-08-19 11:43		Mar-08-19 11:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.03	5.03	<5.03	5.03				
TPH by SW8015 Mod	***Extracted:***	Mar-07-19 17:00		Mar-07-19 17:00					
	Analyzed:	Mar-08-19 04:12		Mar-08-19 04:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 616900

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (0152019)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616900-001	Date Collected:	03.04.19 12.46	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.08.19 11.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.19 04.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.08.19 04.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 04.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.08.19 04.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.08.19 04.12	
o-Terphenyl	84-15-1	90	%	70-135	03.08.19 04.12	

Certificate of Analytical Results 616900

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (0152019)

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616900-001	Date Collected:	03.04.19 12.46	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.08.19 06.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.08.19 06.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.08.19 06.56	
4-Bromofluorobenzene	460-00-4	103	%	70-130	03.08.19 06.56	

Certificate of Analytical Results 616900

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (0152019)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616900-002	Date Collected:	03.04.19 12.48	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.08.19 11.54	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.19 04.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.08.19 04.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 04.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.08.19 04.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.08.19 04.31	
o-Terphenyl	84-15-1	92	%	70-135	03.08.19 04.31	

Certificate of Analytical Results 616900

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (0152019)

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616900-002	Date Collected:	03.04.19 12.48	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.08.19 07.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.08.19 07.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.08.19 07.15	
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.08.19 07.15	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 616900

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (0152019)

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673144-1-BLK LCS Sample Id: 7673144-1-BKS LCSD Sample Id: 7673144-1-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	267	107	266	106	90-110	0	20	mg/kg	03.07.19 22:55	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-002 MS Sample Id: 616897-002 S MSD Sample Id: 616897-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	250	454	102	456	102	90-110	0	20	mg/kg	03.08.19 01:56	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616899-002 MS Sample Id: 616899-002 S MSD Sample Id: 616899-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.54	250	286	114	264	105	90-110	8	20	mg/kg	03.07.19 23:27	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673224-1-BLK LCS Sample Id: 7673224-1-BKS LCSD Sample Id: 7673224-1-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	978	98	967	97	70-135	1	20	mg/kg	03.07.19 21:15	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	970	97	70-135	3	20	mg/kg	03.07.19 21:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		125		70-135	%	03.07.19 21:15
o-Terphenyl	94		118		120		70-135	%	03.07.19 21:15

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 616900

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (0152019)

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 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	941	94	944	95	70-135	0	20	mg/kg	03.07.19 22:15	
Diesel Range Organics (DRO)	9.72	999	956	95	949	94	70-135	1	20	mg/kg	03.07.19 22:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	03.07.19 22:15
o-Terphenyl	112		110		70-135	%	03.07.19 22:15

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673226-1-BLK LCS Sample Id: 7673226-1-BKS LCSD Sample Id: 7673226-1-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	0.0907	90	0.0932	93	70-130	3	35	mg/kg	03.08.19 00:41	
Toluene	<0.000458	0.101	0.0817	81	0.0847	85	70-130	4	35	mg/kg	03.08.19 00:41	
Ethylbenzene	<0.000568	0.101	0.0795	79	0.0828	83	70-130	4	35	mg/kg	03.08.19 00:41	
m,p-Xylenes	<0.00102	0.201	0.161	80	0.167	84	70-130	4	35	mg/kg	03.08.19 00:41	
o-Xylene	<0.000346	0.101	0.0800	79	0.0834	83	70-130	4	35	mg/kg	03.08.19 00:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		105		70-130	%	03.08.19 00:41
4-Bromofluorobenzene	100		96		98		70-130	%	03.08.19 00:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0984	99	0.0991	99	70-130	1	35	mg/kg	03.08.19 01:19	
Toluene	<0.00199	0.0994	0.0869	87	0.0884	89	70-130	2	35	mg/kg	03.08.19 01:19	
Ethylbenzene	<0.000561	0.0994	0.0817	82	0.0835	84	70-130	2	35	mg/kg	03.08.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.164	82	0.168	84	70-130	2	35	mg/kg	03.08.19 01:19	
o-Xylene	<0.000342	0.0994	0.0811	82	0.0833	83	70-130	3	35	mg/kg	03.08.19 01:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.08.19 01:19
4-Bromofluorobenzene	100		101		70-130	%	03.08.19 01:19

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 19L4900

Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU-CVX-JV-RB #001H (01052019)	Turn Around	
Project Number:	012919007	Routine ☐	
P.O. Number:	2RP-5185	Rush:	
Sampler's Name:	Martin Wills	Due Date: 3/7/19	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 0.2	Thermometer ID	IR2
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)
SW01	S	3/4/2019	1246	0-4.5	1	X	X	X
SW02	S	3/4/2019	1248	0-4.5	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			3/6 9:00 pm			3/7/19 1136
2						
3						
4						
5						
6						

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 13 of 15

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: 03/07/2019 11:36:00 AM

Work Order #: 616900

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: 03/07/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/07/2019
Jessica Kramer

Analytical Report 616901

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU-CVX-JV-RB #001H (01052019)

012919007

08-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

08-MAR-19

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

Reference: XENCO Report No(s): **616901**
PLU-CVX-JV-RB #001H (01052019)
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) 616901. 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. 616901 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 616901

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	03-04-19 12:47	4.5	616901-001
FS02	S	03-04-19 12:50	4.5	616901-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081570 BTEX by EPA 8021B

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

Certificate of Analysis Summary 616901

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (01052019)

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:36 am
Report Date: 08-MAR-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	616901-001		616901-002					
	Field Id:	FS01		FS02					
	Depth:	4.5-		4.5-					
	Matrix:	SOIL		SOIL					
	Sampled:	Mar-04-19 12:47		Mar-04-19 12:50					
BTEX by EPA 8021B	***Extracted:***	Mar-07-19 12:00		Mar-07-19 12:00					
	Analyzed:	Mar-08-19 07:34		Mar-08-19 07:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201				
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Mar-07-19 14:00		Mar-07-19 14:00					
	Analyzed:	Mar-08-19 11:01		Mar-08-19 11:11					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<4.95	4.95	<4.98	4.98				
TPH by SW8015 Mod	***Extracted:***	Mar-07-19 17:00		Mar-07-19 17:00					
	Analyzed:	Mar-08-19 04:51		Mar-08-19 05:11					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	17.3	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	17.3	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 616901

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616901-001	Date Collected:	03.04.19 12.47	Sample Depth:	4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.08.19 11.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.19 04.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.08.19 04.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 04.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.08.19 04.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.08.19 04.51	
o-Terphenyl	84-15-1	85	%	70-135	03.08.19 04.51	

Certificate of Analytical Results 616901

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616901-001	Date Collected:	03.04.19 12.47	Sample Depth:	4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.08.19 07.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.08.19 07.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.08.19 07.34	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.08.19 07.34	

Certificate of Analytical Results 616901

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616901-002	Date Collected:	03.04.19 12.50	Sample Depth:	4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.07.19 14.00	Basis:	Wet Weight
Seq Number:	3081522				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.08.19 11.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.19 17.00	Basis:	Wet Weight
Seq Number:	3081581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.19 05.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.3**	15.0	mg/kg	03.08.19 05.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 05.11	U	1
Total TPH	PHC635	**17.3**	15.0	mg/kg	03.08.19 05.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.08.19 05.11	
o-Terphenyl	84-15-1	89	%	70-135	03.08.19 05.11	

Certificate of Analytical Results 616901

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.07.19 11.36
Lab Sample Id:	616901-002	Date Collected:	03.04.19 12.50	Sample Depth:	4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.07.19 12.00	Basis:	Wet Weight
Seq Number:	3081570				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.08.19 07.53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.08.19 07.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.08.19 07.53	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.08.19 07.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 616901

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019)

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673144-1-BLK LCS Sample Id: 7673144-1-BKS LCSD Sample Id: 7673144-1-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	267	107	266	106	90-110	0	20	mg/kg	03.07.19 22:55	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-002 MS Sample Id: 616897-002 S MSD Sample Id: 616897-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	250	454	102	456	102	90-110	0	20	mg/kg	03.08.19 01:56	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3081522 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616899-002 MS Sample Id: 616899-002 S MSD Sample Id: 616899-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.54	250	286	114	264	105	90-110	8	20	mg/kg	03.07.19 23:27	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673224-1-BLK LCS Sample Id: 7673224-1-BKS LCSD Sample Id: 7673224-1-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	978	98	967	97	70-135	1	20	mg/kg	03.07.19 21:15	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	970	97	70-135	3	20	mg/kg	03.07.19 21:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		125		70-135	%	03.07.19 21:15
o-Terphenyl	94		118		120		70-135	%	03.07.19 21:15

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 616901

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019)

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081581 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 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	941	94	944	95	70-135	0	20	mg/kg	03.07.19 22:15	
Diesel Range Organics (DRO)	9.72	999	956	95	949	94	70-135	1	20	mg/kg	03.07.19 22:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	03.07.19 22:15
o-Terphenyl	112		110		70-135	%	03.07.19 22:15

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Solid Date Prep: 03.07.19
MB Sample Id: 7673226-1-BLK LCS Sample Id: 7673226-1-BKS LCSD Sample Id: 7673226-1-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	0.0907	90	0.0932	93	70-130	3	35	mg/kg	03.08.19 00:41	
Toluene	<0.000458	0.101	0.0817	81	0.0847	85	70-130	4	35	mg/kg	03.08.19 00:41	
Ethylbenzene	<0.000568	0.101	0.0795	79	0.0828	83	70-130	4	35	mg/kg	03.08.19 00:41	
m,p-Xylenes	<0.00102	0.201	0.161	80	0.167	84	70-130	4	35	mg/kg	03.08.19 00:41	
o-Xylene	<0.000346	0.101	0.0800	79	0.0834	83	70-130	4	35	mg/kg	03.08.19 00:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		105		70-130	%	03.08.19 00:41
4-Bromofluorobenzene	100		96		98		70-130	%	03.08.19 00:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3081570 Matrix: Soil Date Prep: 03.07.19
Parent Sample Id: 616897-001 MS Sample Id: 616897-001 S MSD Sample Id: 616897-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0984	99	0.0991	99	70-130	1	35	mg/kg	03.08.19 01:19	
Toluene	<0.00199	0.0994	0.0869	87	0.0884	89	70-130	2	35	mg/kg	03.08.19 01:19	
Ethylbenzene	<0.000561	0.0994	0.0817	82	0.0835	84	70-130	2	35	mg/kg	03.08.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.164	82	0.168	84	70-130	2	35	mg/kg	03.08.19 01:19	
o-Xylene	<0.000342	0.0994	0.0811	82	0.0833	83	70-130	3	35	mg/kg	03.08.19 01:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.08.19 01:19
4-Bromofluorobenzene	100		101		70-130	%	03.08.19 01:19

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 616901

Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178 Email:		abaker@ltenv.com; mwills@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-CVX-JV-RB #001H (01052019)	Turn Around	
Project Number:	012919007	Routine ☐	
P.O. Number:	2RP-5185	Rush:	
Sampler's Name:	Martin Wills	Due Date: 3/7/19	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.3/0.2	Thermometer ID	IR
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS01	S	3/4/2019	1247	4.5	1	X	X	X
FS02	S	3/4/2019	1250	4.5	1	X	X	X

Work Order Notes

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

Sample Comments

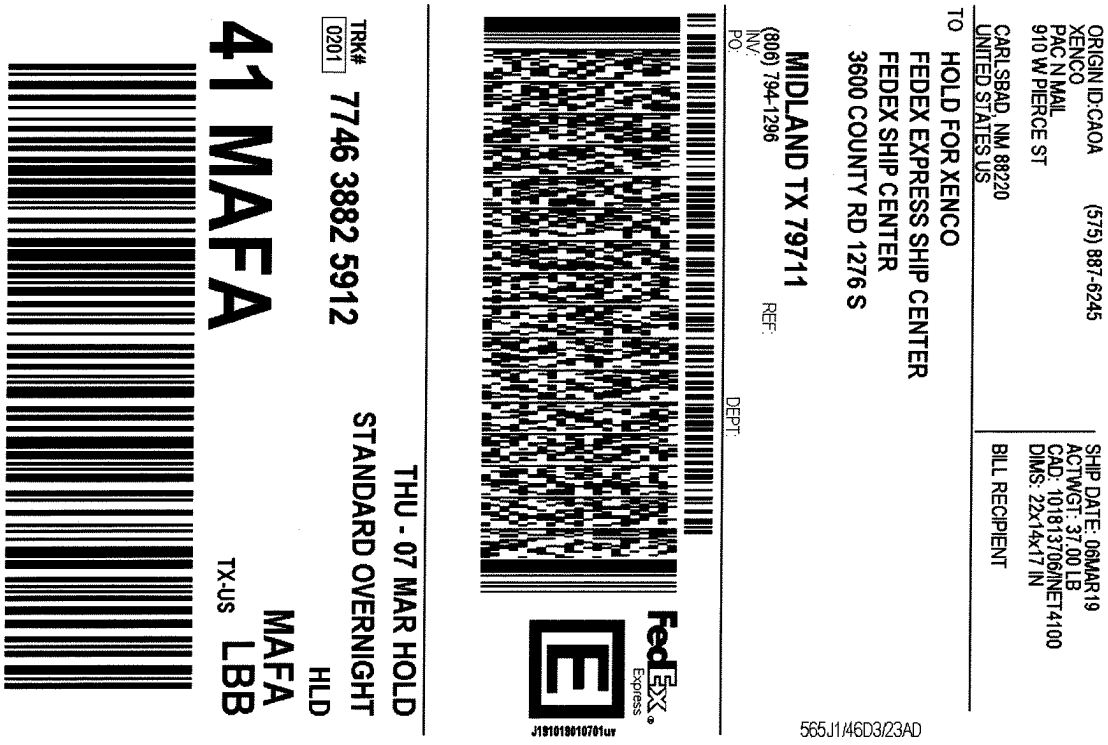
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			3/6 9:00 PM			3/7/19
2						11:26
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: 03/07/2019 11:36:00 AM

Work Order #: 616901

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: 03/07/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/07/2019

Jessica Kramer

Analytical Report 617310

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU-CVX-JV-RB #001H (01052019

012919007

18-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

18-MAR-19

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

Reference: XENCO Report No(s): **617310**
PLU-CVX-JV-RB #001H (01052019
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) 617310. 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. 617310 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW03	S	03-07-19 09:45	0 - 4.5	617310-001
SW04	S	03-07-19 10:01	0 - 4.5	617310-002
SW05	S	03-07-19 10:40	0 - 4.5	617310-003
SW06	S	03-07-19 11:30	0 - 4.5	617310-004
SW07	S	03-07-19 11:33	0 - 4.5	617310-005
SW08	S	03-07-19 13:03	0 - 4.5	617310-006
SW09	S	03-07-19 14:10	0 - 4.5	617310-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082421 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: 617310-003.

Batch: LBA-3082424 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617310-006 SD,617310-007.

Lab Sample ID 617310-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 617310-006, -007.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Benzene, Toluene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 617310-006, -007

Certificate of Analysis Summary 617310

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (01052019

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 18-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617310-001		617310-002		617310-003		617310-004		617310-005		617310-006	
	Field Id:	SW03		SW04		SW05		SW06		SW07		SW08	
	Depth:	0-4.5		0-4.5		0-4.5		0-4.5		0-4.5		0-4.5	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-07-19 09:45		Mar-07-19 10:01		Mar-07-19 10:40		Mar-07-19 11:30		Mar-07-19 11:33		Mar-07-19 13:03	
BTEX by EPA 8021B	***Extracted:***	Mar-15-19 12:00		Mar-15-19 12:00		Mar-15-19 12:00		Mar-15-19 12:00		Mar-15-19 12:00		Mar-15-19 15:00	
	Analyzed:	Mar-16-19 09:38		Mar-16-19 09:57		Mar-16-19 10:16		Mar-16-19 10:35		Mar-16-19 10:54		Mar-16-19 15:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	0.00786	0.00400	<0.00403	0.00403	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	0.00786	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	0.00786	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 08:30		Mar-13-19 08:30		Mar-13-19 08:30		Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00	
	Analyzed:	Mar-13-19 17:54		Mar-13-19 18:00		Mar-13-19 18:07		Mar-13-19 12:30		Mar-13-19 13:02		Mar-13-19 13:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		606	500	<4.96	4.96	<4.97	4.97	<4.98	4.98	<5.02	5.02	<4.96	4.96
TPH by SW8015 Mod	***Extracted:***	Mar-12-19 14:00		Mar-12-19 14:00		Mar-12-19 14:00		Mar-12-19 14:00		Mar-12-19 14:00		Mar-12-19 14:00	
	Analyzed:	Mar-12-19 21:52		Mar-12-19 22:51		Mar-12-19 23:11		Mar-12-19 23:32		Mar-12-19 23:52		Mar-13-19 00:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	32.9	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	32.9	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 617310

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (01052019

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 18-MAR-19
Project Manager: Kalei Stout

Analysis Requested								
	Lab Id:	617310-007						
	Field Id:	SW09						
	Depth:	0-4.5						
	Matrix:	SOIL						
	Sampled:	Mar-07-19 14:10						
BTEX by EPA 8021B	***Extracted:***	Mar-15-19 15:00						
	Analyzed:	Mar-16-19 15:36						
	Units/RL:	mg/kg	RL					
Benzene		<0.00202	0.00202					
Toluene		0.00218	0.00202					
Ethylbenzene		<0.00202	0.00202					
m,p-Xylenes		<0.00403	0.00403					
o-Xylene		<0.00202	0.00202					
Total Xylenes		<0.00202	0.00202					
Total BTEX		0.00218	0.00202					
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 10:00						
	Analyzed:	Mar-13-19 13:23						
	Units/RL:	mg/kg	RL					
Chloride		<5.00	5.00					
TPH by SW8015 Mod	***Extracted:***	Mar-12-19 14:00						
	Analyzed:	Mar-13-19 00:32						
	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					

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-001	Date Collected:	03.07.19 09.45	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 08.30	Basis:	Wet Weight
Seq Number:	3082023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**606**	500	mg/kg	03.13.19 17.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 21.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 21.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 21.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 21.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.12.19 21.52	
o-Terphenyl	84-15-1	91	%	70-135	03.12.19 21.52	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-001	Date Collected:	03.07.19 09.45	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 12.00	Basis:	Wet Weight
Seq Number:	3082421				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.16.19 09.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.16.19 09.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.16.19 09.38	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 09.38	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-002	Date Collected:	03.07.19 10.01	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 08.30	Basis:	Wet Weight
Seq Number:	3082023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.13.19 18.00	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 22.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 22.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 22.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 22.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.12.19 22.51	
o-Terphenyl	84-15-1	87	%	70-135	03.12.19 22.51	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-002	Date Collected:	03.07.19 10.01	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 12.00	Basis:	Wet Weight
Seq Number:	3082421				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.16.19 09.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 09.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.16.19 09.57	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.16.19 09.57	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-003	Date Collected:	03.07.19 10.40	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 08.30	Basis:	Wet Weight
Seq Number:	3082023				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.13.19 18.07	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.12.19 23.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.12.19 23.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.12.19 23.11	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.12.19 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.12.19 23.11	
o-Terphenyl	84-15-1	88	%	70-135	03.12.19 23.11	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-003	Date Collected:	03.07.19 10.40	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 12.00	Basis:	Wet Weight
Seq Number:	3082421				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 10.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 10.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 10.16	U	1
m,p-Xylenes	179601-23-1	**0.00786**	0.00400	mg/kg	03.16.19 10.16		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 10.16	U	1
Total Xylenes	1330-20-7	**0.00786**	0.00200	mg/kg	03.16.19 10.16		1
Total BTEX		**0.00786**	0.00200	mg/kg	03.16.19 10.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	174	%	70-130	03.16.19 10.16	**
1,4-Difluorobenzene	540-36-3	117	%	70-130	03.16.19 10.16	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-004	Date Collected:	03.07.19 11.30	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.13.19 12.30	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 23.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 23.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 23.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 23.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.12.19 23.32	
o-Terphenyl	84-15-1	85	%	70-135	03.12.19 23.32	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-004	Date Collected:	03.07.19 11.30	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 12.00	Basis:	Wet Weight
Seq Number:	3082421				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.16.19 10.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.16.19 10.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.16.19 10.35	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.16.19 10.35	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-005	Date Collected:	03.07.19 11.33	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	03.13.19 13.02	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 23.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**32.9**	15.0	mg/kg	03.12.19 23.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 23.52	U	1
Total TPH	PHC635	**32.9**	15.0	mg/kg	03.12.19 23.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.12.19 23.52	
o-Terphenyl	84-15-1	88	%	70-135	03.12.19 23.52	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-005	Date Collected:	03.07.19 11.33	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 12.00	Basis:	Wet Weight
Seq Number:	3082421				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.16.19 10.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.16.19 10.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 10.54	
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.16.19 10.54	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-006	Date Collected:	03.07.19 13.03	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.13.19 13.12	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.13.19 00.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.13.19 00.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.13.19 00.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.13.19 00.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.13.19 00.12	
o-Terphenyl	84-15-1	89	%	70-135	03.13.19 00.12	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-006	Date Collected:	03.07.19 13.03	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.16.19 15.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 15.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.16.19 15.17	
4-Bromofluorobenzene	460-00-4	104	%	70-130	03.16.19 15.17	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-007	Date Collected:	03.07.19 14.10	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.13.19 13.23	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 14.00	Basis:	Wet Weight
Seq Number:	3081985				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.13.19 00.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.13.19 00.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.13.19 00.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.13.19 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.13.19 00.32	
o-Terphenyl	84-15-1	81	%	70-135	03.13.19 00.32	

Certificate of Analytical Results 617310

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617310-007	Date Collected:	03.07.19 14.10	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.16.19 15.36	U	1
Toluene	108-88-3	**0.00218**	0.00202	mg/kg	03.16.19 15.36		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.16.19 15.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.16.19 15.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.16.19 15.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.16.19 15.36	U	1
Total BTEX		**0.00218**	0.00202	mg/kg	03.16.19 15.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	172	%	70-130	03.16.19 15.36	**
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.16.19 15.36	

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 617310

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082023 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673457-1-BLK LCS Sample Id: 7673457-1-BKS LCSD Sample Id: 7673457-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.10	250	270	108	257	103	90-110	5	20	mg/kg	03.13.19 14:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673476-1-BLK LCS Sample Id: 7673476-1-BKS LCSD Sample Id: 7673476-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.883	250	266	106	272	109	90-110	2	20	mg/kg	03.13.19 12:08	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082023 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617103-014 MS Sample Id: 617103-014 S MSD Sample Id: 617103-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.33	252	272	106	271	106	90-110	0	20	mg/kg	03.13.19 16:48	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082023 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617402-001 MS Sample Id: 617402-001 S MSD Sample Id: 617402-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.0	250	274	103	281	106	90-110	3	20	mg/kg	03.13.19 15:17	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617310-004 MS Sample Id: 617310-004 S MSD Sample Id: 617310-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.64	249	269	107	270	107	90-110	0	20	mg/kg	03.13.19 12:40	

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

QC Summary 617310

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617311-007 MS Sample Id: 617311-007 S MSD Sample Id: 617311-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.01	249	269	108	269	108	90-110	0	20	mg/kg	03.13.19 15:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081985 Matrix: Solid Date Prep: 03.12.19
MB Sample Id: 7673483-1-BLK LCS Sample Id: 7673483-1-BKS LCSD Sample Id: 7673483-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1020	102	70-135	6	20	mg/kg	03.12.19 21:12	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1040	104	70-135	5	20	mg/kg	03.12.19 21:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		123		119		70-135	%	03.12.19 21:12
o-Terphenyl	105		111		106		70-135	%	03.12.19 21:12

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081985 Matrix: Soil Date Prep: 03.12.19
Parent Sample Id: 617310-001 MS Sample Id: 617310-001 S MSD Sample Id: 617310-001 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	1040	104	1030	103	70-135	1	20	mg/kg	03.12.19 22:12	
Diesel Range Organics (DRO)	<8.12	999	1070	107	1070	107	70-135	0	20	mg/kg	03.12.19 22:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		124		70-135	%	03.12.19 22:12
o-Terphenyl	100		95		70-135	%	03.12.19 22:12

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 617310

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082421 — Matrix: Solid — Date Prep: 03.15.19
MB Sample Id: 7673753-1-BLK — LCS Sample Id: 7673753-1-BKS — LCSD Sample Id: 7673753-1-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	0.102	102	0.0989	98	70-130	3	35	mg/kg	03.16.19 03:40	
Toluene	<0.000456	0.100	0.107	107	0.103	102	70-130	4	35	mg/kg	03.16.19 03:40	
Ethylbenzene	<0.000565	0.100	0.0962	96	0.0924	91	70-130	4	35	mg/kg	03.16.19 03:40	
m,p-Xylenes	<0.00101	0.200	0.185	93	0.174	87	70-130	6	35	mg/kg	03.16.19 03:40	
o-Xylene	<0.000344	0.100	0.0949	95	0.0898	89	70-130	6	35	mg/kg	03.16.19 03:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		101		101		70-130	%	03.16.19 03:40
4-Bromofluorobenzene	105		100		97		70-130	%	03.16.19 03:40

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082424 — Matrix: Solid — Date Prep: 03.15.19
MB Sample Id: 7673758-1-BLK — LCS Sample Id: 7673758-1-BKS — LCSD Sample Id: 7673758-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.101	102	0.0952	95	70-130	6	35	mg/kg	03.16.19 13:25	
Toluene	<0.000453	0.0994	0.106	107	0.102	102	70-130	4	35	mg/kg	03.16.19 13:25	
Ethylbenzene	<0.000561	0.0994	0.0959	96	0.0930	93	70-130	3	35	mg/kg	03.16.19 13:25	
m,p-Xylenes	<0.00101	0.199	0.184	92	0.179	90	70-130	3	35	mg/kg	03.16.19 13:25	
o-Xylene	<0.000342	0.0994	0.0956	96	0.0925	93	70-130	3	35	mg/kg	03.16.19 13:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		104		101		70-130	%	03.16.19 13:25
4-Bromofluorobenzene	104		104		102		70-130	%	03.16.19 13:25

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082421 — Matrix: Soil — Date Prep: 03.15.19
Parent Sample Id: 617807-001 — MS Sample Id: 617807-001 S — MSD Sample Id: 617807-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0604	60	0.0577	58	70-130	5	35	mg/kg	03.16.19 04:18	X
Toluene	<0.000459	0.101	0.0820	81	0.0741	74	70-130	10	35	mg/kg	03.16.19 04:18	
Ethylbenzene	<0.000569	0.101	0.0749	74	0.0663	66	70-130	12	35	mg/kg	03.16.19 04:18	X
m,p-Xylenes	<0.00102	0.202	0.155	77	0.137	69	70-130	12	35	mg/kg	03.16.19 04:18	X
o-Xylene	<0.000347	0.101	0.0825	82	0.0730	73	70-130	12	35	mg/kg	03.16.19 04:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	03.16.19 04:18
4-Bromofluorobenzene	124		121		70-130	%	03.16.19 04:18

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

QC Summary 617310

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019

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

Seq Number: 3082424 Matrix: Soil Date Prep: 03.15.19

Parent Sample Id: 617310-006 MS Sample Id: 617310-006 S MSD Sample Id: 617310-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000461	0.100	0.0909	90	0.0436	43	70-130	70	35	mg/kg	03.16.19 14:03	XF
Toluene	0.00121	0.100	0.0952	94	0.0621	61	70-130	42	35	mg/kg	03.16.19 14:03	XF
Ethylbenzene	<0.000565	0.100	0.0895	90	0.0729	73	70-130	20	35	mg/kg	03.16.19 14:03	
m,p-Xylenes	<0.00101	0.200	0.171	86	0.148	74	70-130	14	35	mg/kg	03.16.19 14:03	
o-Xylene	0.000441	0.100	0.0887	88	0.0736	73	70-130	19	35	mg/kg	03.16.19 14:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		124		70-130	%	03.16.19 14:03
4-Bromofluorobenzene	107		216	**	70-130	%	03.16.19 14:03

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

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

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

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

Chain of Custody

Work Order No: 617310

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
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com; mwills@ltenv.com

Work Order Comments

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

Project Name:	PLU-CVX-JV-RB #001H (01052019)	Turn Around	
Project Number:	012919007	Routine	X
P.O. Number:	2RP-5185	Rush:	
Sampler's Name:	Martin Wills	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.3 \ 0.2	Thermometer ID	CF	
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)
SW03	S	3/7/2019	945	0-4.5	1	X	X	X
SW04	S	3/7/2019	1001	0-4.5	1	X	X	X
SW05	S	3/7/2019	1040	0-4.5	1	X	X	X
SW06	S	3/7/2019	1130	0-4.5	1	X	X	X
SW07	S	3/7/2019	1133	0-4.5	1	X	X	X
SW08	S	3/7/2019	1303	0-4.5	1	X	X	X
SW09	S	3/7/2019	1410	0-4.5	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			2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 26 of 28

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: 03/12/2019 12:05:00 PM

Work Order #: 617310

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: 03/12/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/12/2019

Jessica Kramer

Analytical Report 617311

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU-CVX-JV-RB #001H (01052019)

012919007

18-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

18-MAR-19

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

Reference: XENCO Report No(s): **617311**
PLU-CVX-JV-RB #001H (01052019)
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) 617311. 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. 617311 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW10	S	03-08-19 09:20	0 - 4.5	617311-001
SW11	S	03-08-19 09:59	0 - 4.5	617311-002
SW12	S	03-08-19 10:20	0 - 4.5	617311-003
SW13	S	03-08-19 10:52	0 - 4.5	617311-004
SW14	S	03-08-19 11:28	0 - 4.5	617311-005
SW15	S	03-08-19 11:45	0 - 4.5	617311-006
SW16	S	03-08-19 11:45	0 - 4.5	617311-007
SW17	S	03-08-19 13:22	0 - 4.5	617311-008
SW18	S	03-08-19 14:22	0 - 4.5	617311-009

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082424 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617310-006 SD,617311-007.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 617311

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (01052019)

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 18-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617311-001		617311-002		617311-003		617311-004		617311-005		617311-006	
	Field Id:	SW10		SW11		SW12		SW13		SW14		SW15	
	Depth:	0-4.5		0-4.5		0-4.5		0-4.5		0-4.5		0-4.5	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-08-19 09:20		Mar-08-19 09:59		Mar-08-19 10:20		Mar-08-19 10:52		Mar-08-19 11:28		Mar-08-19 11:45	
BTEX by EPA 8021B	***Extracted:***	Mar-15-19 15:00		Mar-15-19 15:00		Mar-15-19 15:00		Mar-15-19 15:00		Mar-15-19 15:00		Mar-15-19 15:00	
	Analyzed:	Mar-16-19 15:55		Mar-16-19 16:14		Mar-16-19 16:33		Mar-16-19 16:52		Mar-16-19 17:11		Mar-16-19 17:30	
	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	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
m,p-Xylenes		<0.00399	0.00399	<0.00400	0.00400	<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00397	0.00397
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00198	0.00198
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00	
	Analyzed:	Mar-13-19 13:33		Mar-13-19 14:05		Mar-13-19 14:16		Mar-13-19 14:27		Mar-13-19 14:37		Mar-13-19 14:48	
	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	<4.99	4.99	<4.97	4.97	<5.01	5.01	<5.01	5.01	<4.96	4.96
TPH by SW8015 Mod	***Extracted:***	Mar-12-19 13:00		Mar-12-19 13:00		Mar-12-19 13:00		Mar-12-19 13:00		Mar-12-19 13:00		Mar-12-19 13:00	
	Analyzed:	Mar-12-19 15:54		Mar-12-19 16:14		Mar-12-19 17:13		Mar-12-19 17:33		Mar-12-19 17:53		Mar-12-19 18:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 617311

LT Environmental, Inc., Arvada, CO

Project Name: PLU-CVX-JV-RB #001H (01052019)

Project Id: 012919007
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 18-MAR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	617311-007		617311-008		617311-009				
	Field Id:	SW16		SW17		SW18				
	Depth:	0-4.5		0-4.5		0-4.5				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Mar-08-19 11:45		Mar-08-19 13:22		Mar-08-19 14:22				
BTEX by EPA 8021B	***Extracted:***	Mar-15-19 15:00		Mar-15-19 15:00		Mar-15-19 15:00				
	Analyzed:	Mar-16-19 17:49		Mar-16-19 18:08		Mar-16-19 19:22				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00401	0.00401			
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200			
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 10:00		Mar-13-19 10:00		Mar-13-19 10:00				
	Analyzed:	Mar-13-19 14:59		Mar-13-19 15:31		Mar-13-19 15:41				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		<4.98	4.98	<4.96	4.96	<4.95	4.95			
TPH by SW8015 Mod	***Extracted:***	Mar-12-19 13:00		Mar-12-19 13:00		Mar-12-19 13:00				
	Analyzed:	Mar-12-19 18:32		Mar-12-19 18:52		Mar-12-19 19:12				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0			
Diesel Range Organics (DRO)		<15.0	15.0	16.8	15.0	<15.0	15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0			
Total TPH		<15.0	15.0	16.8	15.0	<15.0	15.0			

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-001	Date Collected:	03.08.19 09.20	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.13.19 13.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 15.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 15.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 15.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 15.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.12.19 15.54	
o-Terphenyl	84-15-1	94	%	70-135	03.12.19 15.54	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-001	Date Collected:	03.08.19 09.20	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.16.19 15.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 15.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.16.19 15.55	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.16.19 15.55	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-002	Date Collected:	03.08.19 09.59	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.13.19 14.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 16.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 16.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 16.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 16.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.12.19 16.14	
o-Terphenyl	84-15-1	91	%	70-135	03.12.19 16.14	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-002	Date Collected:	03.08.19 09.59	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.16.19 16.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 16.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 16.14	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.16.19 16.14	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-003	Date Collected:	03.08.19 10.20	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.13.19 14.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 17.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 17.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 17.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.12.19 17.13	
o-Terphenyl	84-15-1	91	%	70-135	03.12.19 17.13	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-003	Date Collected:	03.08.19 10.20	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.16.19 16.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 16.33	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.16.19 16.33	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-004	Date Collected:	03.08.19 10.52	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	03.13.19 14.27	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 17.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 17.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 17.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 17.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.12.19 17.33	
o-Terphenyl	84-15-1	103	%	70-135	03.12.19 17.33	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-004	Date Collected:	03.08.19 10.52	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.16.19 16.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.16.19 16.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.16.19 16.52	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.16.19 16.52	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-005	Date Collected:	03.08.19 11.28	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	03.13.19 14.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.12.19 17.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.12.19 17.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.12.19 17.53	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.12.19 17.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.12.19 17.53	
o-Terphenyl	84-15-1	86	%	70-135	03.12.19 17.53	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-005	Date Collected:	03.08.19 11.28	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.16.19 17.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.16.19 17.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 17.11	
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.16.19 17.11	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW15**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-006	Date Collected:	03.08.19 11.45	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.13.19 14.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.12.19 18.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.12.19 18.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.12.19 18.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.12.19 18.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.12.19 18.13	
o-Terphenyl	84-15-1	89	%	70-135	03.12.19 18.13	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW15**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-006	Date Collected:	03.08.19 11.45	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.16.19 17.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.16.19 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.16.19 17.30	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.16.19 17.30	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW16**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-007	Date Collected:	03.08.19 11.45	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.13.19 14.59	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 18.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.12.19 18.32	
o-Terphenyl	84-15-1	91	%	70-135	03.12.19 18.32	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW16**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-007	Date Collected:	03.08.19 11.45	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.16.19 17.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.16.19 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.16.19 17.49	
4-Bromofluorobenzene	460-00-4	135	%	70-130	03.16.19 17.49	**

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW17**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-008	Date Collected:	03.08.19 13.22	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.13.19 15.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.8**	15.0	mg/kg	03.12.19 18.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 18.52	U	1
Total TPH	PHC635	**16.8**	15.0	mg/kg	03.12.19 18.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.12.19 18.52	
o-Terphenyl	84-15-1	90	%	70-135	03.12.19 18.52	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW17**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-008	Date Collected:	03.08.19 13.22	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.16.19 18.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.16.19 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 18.08	
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.16.19 18.08	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-009	Date Collected:	03.08.19 14.22	Sample Depth:	0 - 4.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.13.19 15.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.12.19 13.00	Basis:	Wet Weight
Seq Number:	3081984				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.19 19.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.12.19 19.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.12.19 19.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.12.19 19.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.12.19 19.12	
o-Terphenyl	84-15-1	87	%	70-135	03.12.19 19.12	

Certificate of Analytical Results 617311

LT Environmental, Inc., Arvada, CO

PLU-CVX-JV-RB #001H (01052019)

Sample Id:	**SW18**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617311-009	Date Collected:	03.08.19 14.22	Sample Depth:	0 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.16.19 19.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.16.19 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 19.22	
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.16.19 19.22	

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 617311

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019)

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673476-1-BLK LCS Sample Id: 7673476-1-BKS LCSD Sample Id: 7673476-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.883	250	266	106	272	109	90-110	2	20	mg/kg	03.13.19 12:08	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617310-004 MS Sample Id: 617310-004 S MSD Sample Id: 617310-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.64	249	269	107	270	107	90-110	0	20	mg/kg	03.13.19 12:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617311-007 MS Sample Id: 617311-007 S MSD Sample Id: 617311-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.01	249	269	108	269	108	90-110	0	20	mg/kg	03.13.19 15:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081984 Matrix: Solid Date Prep: 03.12.19
MB Sample Id: 7673482-1-BLK LCS Sample Id: 7673482-1-BKS LCSD Sample Id: 7673482-1-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	1010	101	70-135	0	20	mg/kg	03.12.19 11:57	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	1040	104	70-135	2	20	mg/kg	03.12.19 11:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		119		121		70-135	%	03.12.19 11:57
o-Terphenyl	95		107		113		70-135	%	03.12.19 11:57

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

QC Summary 617311

LT Environmental, Inc.

PLU-CVX-JV-RB #001H (01052019)

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081984 Matrix: Soil Date Prep: 03.12.19
Parent Sample Id: 617268-001 MS Sample Id: 617268-001 S MSD Sample Id: 617268-001 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	1020	102	1020	102	70-135	0	20	mg/kg	03.12.19 12:56	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	1040	104	70-135	1	20	mg/kg	03.12.19 12:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		115		70-135	%	03.12.19 12:56
o-Terphenyl	98		99		70-135	%	03.12.19 12:56

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082424 Matrix: Solid Date Prep: 03.15.19
MB Sample Id: 7673758-1-BLK LCS Sample Id: 7673758-1-BKS LCSD Sample Id: 7673758-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.101	102	0.0952	95	70-130	6	35	mg/kg	03.16.19 13:25	
Toluene	<0.000453	0.0994	0.106	107	0.102	102	70-130	4	35	mg/kg	03.16.19 13:25	
Ethylbenzene	<0.000561	0.0994	0.0959	96	0.0930	93	70-130	3	35	mg/kg	03.16.19 13:25	
m,p-Xylenes	<0.00101	0.199	0.184	92	0.179	90	70-130	3	35	mg/kg	03.16.19 13:25	
o-Xylene	<0.000342	0.0994	0.0956	96	0.0925	93	70-130	3	35	mg/kg	03.16.19 13:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		104		101		70-130	%	03.16.19 13:25
4-Bromofluorobenzene	104		104		102		70-130	%	03.16.19 13:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082424 Matrix: Soil Date Prep: 03.15.19
Parent Sample Id: 617310-006 MS Sample Id: 617310-006 S MSD Sample Id: 617310-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000461	0.100	0.0909	90	0.0436	43	70-130	70	35	mg/kg	03.16.19 14:03	XF
Toluene	0.00121	0.100	0.0952	94	0.0621	61	70-130	42	35	mg/kg	03.16.19 14:03	XF
Ethylbenzene	<0.000565	0.100	0.0895	90	0.0729	73	70-130	20	35	mg/kg	03.16.19 14:03	
m,p-Xylenes	<0.00101	0.200	0.171	86	0.148	74	70-130	14	35	mg/kg	03.16.19 14:03	
o-Xylene	0.000441	0.100	0.0887	88	0.0736	73	70-130	19	35	mg/kg	03.16.19 14:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		124		70-130	%	03.16.19 14:03
4-Bromofluorobenzene	107		216	**	70-130	%	03.16.19 14:03

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

Chain of Custody

Work Order No: 617311

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
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	abaker@ltenv.com; mwills@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-CVX-JV-RB #001H (01052019)	Turn Around	Routine X
Project Number:	012919007		Rush:
P.O. Number:	2RP-5185	Due Date:	
Sampler's Name:	Martin Wills		

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.3 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)
SW10	S	3/8/2019	920	0-4.5	1	X	X	X
SW11	S	3/8/2019	959	0-4.5	1	X	X	X
SW12	S	3/8/2019	1020	0-4.5	1	X	X	X
SW13	S	3/8/2019	1052	0-4.5	1	X	X	X
SW14	S	3/8/2019	1128	0-4.5	1	X	X	X
SW15	S	3/8/2019	1145	0-4.5	1	X	X	X
SW16	S	3/8/2019	1146	0-4.5	1	X	X	X
SW17	S	3/8/2019	1355	0-4.5	1	X	X	X
SW18	S	3/8/2019	1422	0-4.5	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			3/11/19@1000	2			3/12/19 1005
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 28 of 30

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: 03/12/2019 12:05:00 PM

Work Order #: 617311

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: 03/12/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/12/2019
Jessica Kramer

Analytical Report 617488

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

14-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

14-MAR-19

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

Reference: XENCO Report No(s): **617488**
PLU CVX JV RB 001H
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) 617488. 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. 617488 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617488

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW20	S	03-11-19 10:05	0 - 4 ft	617488-001

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082109 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 617488

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Wed Mar-13-19 12:45 pm
Report Date: 14-MAR-19
Project Manager: Kalei Stout

Analysis Requested							
	Lab Id:	617488-001					
	Field Id:	SW20					
	Depth:	0-4 ft					
	Matrix:	SOIL					
	Sampled:	Mar-11-19 10:05					
BTEX by EPA 8021B	***Extracted:***	Mar-13-19 13:00					
	Analyzed:	Mar-13-19 22:31					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398				
o-Xylene		<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199				
Total BTEX		<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 15:40					
	Analyzed:	Mar-13-19 20:10					
	Units/RL:	mg/kg	RL				
Chloride		<5.01	5.01				
TPH by SW8015 Mod	***Extracted:***	Mar-13-19 15:00					
	Analyzed:	Mar-13-19 20:32					
	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				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 617488

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW20**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617488-001	Date Collected:	03.11.19 10.05	Sample Depth:	0 - 4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	03.13.19 20.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.13.19 20.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.13.19 20.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.13.19 20.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.13.19 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.13.19 20.32	
o-Terphenyl	84-15-1	86	%	70-135	03.13.19 20.32	

Certificate of Analytical Results 617488

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW20**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617488-001	Date Collected:	03.11.19 10.05	Sample Depth:	0 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.13.19 22.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.13.19 22.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	03.13.19 22.31	
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.13.19 22.31	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 617488

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673513-1-BLK LCS Sample Id: 7673513-1-BKS LCSD Sample Id: 7673513-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.21	250	257	103	261	104	90-110	2	20	mg/kg	03.13.19 18:33	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617312-002 MS Sample Id: 617312-002 S MSD Sample Id: 617312-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.16	251	258	100	256	99	90-110	1	20	mg/kg	03.13.19 18:52	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617489-001 MS Sample Id: 617489-001 S MSD Sample Id: 617489-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.08	252	281	111	289	114	90-110	3	20	mg/kg	03.13.19 20:23	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082074 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673530-1-BLK LCS Sample Id: 7673530-1-BKS LCSD Sample Id: 7673530-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1090	109	1040	104	70-135	5	20	mg/kg	03.13.19 19:52	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1120	112	70-135	2	20	mg/kg	03.13.19 19:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		124		126		70-135	%	03.13.19 19:52
o-Terphenyl	107		113		117		70-135	%	03.13.19 19:52

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

QC Summary 617488

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082074 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617488-001 MS Sample Id: 617488-001 S MSD Sample Id: 617488-001 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)	8.43	999	1070	106	1090	108	70-135	2	20	mg/kg	03.13.19 20:52	
Diesel Range Organics (DRO)	<8.12	999	1110	111	1120	112	70-135	1	20	mg/kg	03.13.19 20:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		122		70-135	%	03.13.19 20:52
o-Terphenyl	107		105		70-135	%	03.13.19 20:52

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082109 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673557-1-BLK LCS Sample Id: 7673557-1-BKS LCSD Sample Id: 7673557-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.105	104	0.103	103	70-130	2	35	mg/kg	03.13.19 20:39	
Toluene	<0.000458	0.101	0.0996	99	0.0982	98	70-130	1	35	mg/kg	03.13.19 20:39	
Ethylbenzene	<0.000568	0.101	0.113	112	0.113	113	70-130	0	35	mg/kg	03.13.19 20:39	
m,p-Xylenes	<0.00102	0.201	0.220	109	0.220	109	70-130	0	35	mg/kg	03.13.19 20:39	
o-Xylene	<0.000346	0.101	0.108	107	0.107	107	70-130	1	35	mg/kg	03.13.19 20:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		90		88		70-130	%	03.13.19 20:39
4-Bromofluorobenzene	108		104		104		70-130	%	03.13.19 20:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082109 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617488-001 MS Sample Id: 617488-001 S MSD Sample Id: 617488-001 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	0.0984	98	0.0953	94	70-130	3	35	mg/kg	03.13.19 21:17	
Toluene	<0.000457	0.100	0.0929	93	0.0895	89	70-130	4	35	mg/kg	03.13.19 21:17	
Ethylbenzene	<0.000566	0.100	0.103	103	0.0997	99	70-130	3	35	mg/kg	03.13.19 21:17	
m,p-Xylenes	0.00132	0.200	0.201	100	0.195	96	70-130	3	35	mg/kg	03.13.19 21:17	
o-Xylene	<0.000345	0.100	0.0974	97	0.0951	94	70-130	2	35	mg/kg	03.13.19 21:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		91		70-130	%	03.13.19 21:17
4-Bromofluorobenzene	104		105		70-130	%	03.13.19 21:17

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

Chain of Custody

Work Order No: 617488

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email: ~~bbclill@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 CNX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP 5185	Rush: same day	
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	5.8/5.7	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 0=8021)	Chloride (EPA 300.0)
SW20	S	3/11/19	1005	0-4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

03/11/2019

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		3/12/19 1050	2		3/13/19 1245
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/13/2019 12:45:00 PM

Work Order #: 617488

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)?	5.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/13/2019

Checklist reviewed by: Jessica Kramer Date: 03/13/2019

Analytical Report 617489

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

14-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

14-MAR-19

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

Reference: XENCO Report No(s): **617489**
PLU CVX JV RB 001H
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) 617489. 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. 617489 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	03-11-19 17:00	4 ft	617489-001
FS04	S	03-11-19 17:05	4 ft	617489-002
FS05	S	03-11-19 17:10	4 ft	617489-003
FS06	S	03-11-19 17:15	4 ft	617489-004
FS07	S	03-11-19 17:20	4 ft	617489-005
FS08	S	03-11-19 17:25	4 ft	617489-006
FS09	S	03-11-19 17:30	4 ft	617489-007
FS10	S	03-11-19 17:35	4 ft	617489-008
FS11	S	03-11-19 17:40	4 ft	617489-009
FS12	S	03-11-19 17:45	4 ft	617489-010
FS13	S	03-11-19 17:50	4 ft	617489-011
FS14	S	03-11-19 17:55	4 ft	617489-012
FS15	S	03-11-19 18:00	4 ft	617489-013

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082059 Inorganic Anions by EPA 300
Lab Sample ID 617489-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 617489-001, -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-3082074 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 617489-005,617489-009,617489-011,617489-010.

Batch: LBA-3082109 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3082131 Inorganic Anions by EPA 300
Lab Sample ID 617505-002 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: 617489-011, -012, -013.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3082173 BTEX by EPA 8021B
Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 617489-004,617489-013.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 617489-011,617489-010,617489-009,617489-008,617489-002,617489-005,617489-004,617489-003,617489-001,617489-006.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 617489

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Wed Mar-13-19 12:45 pm
Report Date: 14-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617489-001		617489-002		617489-003		617489-004		617489-005		617489-006	
	Field Id:	FS03		FS04		FS05		FS06		FS07		FS08	
	Depth:	4- ft		4- ft		4- ft		4- ft		4- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-11-19 17:00		Mar-11-19 17:05		Mar-11-19 17:10		Mar-11-19 17:15		Mar-11-19 17:20		Mar-11-19 17:25	
BTEX by EPA 8021B	***Extracted:***	Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00	
	Analyzed:	Mar-14-19 05:27		Mar-14-19 05:08		Mar-14-19 00:44		Mar-14-19 00:25		Mar-14-19 00:06		Mar-13-19 23:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.0286	0.00199	0.0379	0.00199	0.00807	0.00200	0.0600	0.00201	0.0841	0.00200	0.0402	0.00202
Toluene		5.08 D	0.501	4.79 D	0.498	0.208	0.00200	8.89 D	0.503	14.0 D	0.501	6.06 D	0.498
Ethylbenzene		1.07 D	0.501	0.954 D	0.498	<0.499	0.499	1.28 D	0.503	22.3 D	0.501	0.911 D	0.498
m,p-Xylenes		2.42 D	1.00	2.19 D	0.996	<0.998	0.998	37.9 D	1.01	57.1 D	1.00	28.1 D	0.996
o-Xylene		8.26 D	0.501	7.49 D	0.498	0.358	0.00200	0.398	0.00201	0.368	0.00200	7.45 D	0.498
Total Xylenes		10.7	0.501	9.68	0.498	0.358	0.00200	38.3	0.00201	57.5	0.00200	35.6	0.498
Total BTEX		16.9	0.00199	15.5	0.00199	0.574	0.00200	48.5	0.00201	93.9	0.00200	42.6	0.00202
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40	
	Analyzed:	Mar-13-19 20:17		Mar-13-19 20:36		Mar-13-19 20:43		Mar-13-19 21:02		Mar-13-19 21:09		Mar-13-19 21:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.03	5.03	<4.96	4.96	<4.99	4.99	<4.95	4.95	<4.97	4.97	<4.99	4.99
TPH by SW8015 Mod	***Extracted:***	Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00	
	Analyzed:	Mar-13-19 21:31		Mar-13-19 21:51		Mar-13-19 22:11		Mar-13-19 22:31		Mar-13-19 22:51		Mar-13-19 23:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		607	14.9	621	15.0	271	15.0	1030	15.0	1440	15.0	949	15.0
Diesel Range Organics (DRO)		1710	14.9	2290	15.0	1170	15.0	3080	15.0	3770	15.0	3180	15.0
Motor Oil Range Hydrocarbons (MRO)		190	14.9	249	15.0	133	15.0	298	15.0	362	15.0	303	15.0
Total TPH		2510	14.9	3160	15.0	1570	15.0	4410	15.0	5570	15.0	4430	15.0

Certificate of Analysis Summary 617489

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Wed Mar-13-19 12:45 pm
Report Date: 14-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	617489-007		617489-008		617489-009		617489-010		617489-011		617489-012	
	Field Id:	FS09		FS10		FS11		FS12		FS13		FS14	
	Depth:	4- ft		4- ft		4- ft		4- ft		4- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-11-19 17:30		Mar-11-19 17:35		Mar-11-19 17:40		Mar-11-19 17:45		Mar-11-19 17:50		Mar-11-19 17:55	
BTEX by EPA 8021B	***Extracted:***	Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00		Mar-13-19 13:00	
	Analyzed:	Mar-13-19 22:50		Mar-14-19 04:49		Mar-14-19 04:30		Mar-14-19 04:11		Mar-14-19 03:52		Mar-13-19 23:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	0.0274	0.00201	0.101	0.00200	0.0749	0.00199	0.0810	0.00200	<0.00201	0.00201
Toluene		<0.00198	0.00198	4.01 D	0.496	5.02 D	0.501	10.1 D	0.502	8.38 D	0.496	0.00382	0.00201
Ethylbenzene		<0.00198	0.00198	0.531 D	0.496	0.601 D	0.501	17.6 D	0.502	15.4 D	0.496	0.00359	0.00201
m,p-Xylenes		0.00457	0.00397	20.5 D	0.992	26.5 D	1.00	46.6 D	1.00	40.4 D	0.992	0.0104	0.00402
o-Xylene		<0.00198	0.00198	5.54 D	0.496	0.356	0.00200	0.370	0.00199	0.372	0.00200	<0.00201	0.00201
Total Xylenes		0.00457	0.00198	26.0	0.496	26.9	0.00200	47.0	0.00199	40.8	0.00200	0.0104	0.00201
Total BTEX		0.00457	0.00198	30.6	0.00201	32.6	0.00200	74.7	0.00199	64.6	0.00200	0.0178	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 15:40		Mar-13-19 16:45		Mar-13-19 16:45	
	Analyzed:	Mar-13-19 21:22		Mar-13-19 21:28		Mar-13-19 21:35		Mar-13-19 21:41		Mar-14-19 09:16		Mar-14-19 09:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	<4.99	4.99	<4.95	4.95	<5.02	5.02	<5.00	5.00	<4.98	4.98
TPH by SW8015 Mod	***Extracted:***	Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00		Mar-13-19 15:00	
	Analyzed:	Mar-13-19 23:30		Mar-13-19 23:50		Mar-14-19 06:21		Mar-14-19 01:08		Mar-14-19 01:28		Mar-14-19 01:48	
	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	796	14.9	1520	74.9	1570	15.0	1200	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	3100	14.9	5020	74.9	4970	15.0	3870	15.0	19.3	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	302	14.9	575	74.9	433	15.0	333	15.0	<15.0	15.0
Total TPH		<15.0	15.0	4200	14.9	7120	74.9	6970	15.0	5400	15.0	19.3	15.0

Kalei Stout
Midland Laboratory Director

Certificate of Analysis Summary 617489

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Wed Mar-13-19 12:45 pm
Report Date: 14-MAR-19
Project Manager: Kalei Stout

Analysis Requested								
	Lab Id:	617489-013						
	Field Id:	FS15						
	Depth:	4- ft						
	Matrix:	SOIL						
	Sampled:	Mar-11-19 18:00						
BTEX by EPA 8021B	***Extracted:***	Mar-13-19 13:00						
	Analyzed:	Mar-13-19 23:28						
	Units/RL:	mg/kg	RL					
Benzene		0.00282	0.00199					
Toluene		0.120	0.00199					
Ethylbenzene		<0.499	0.499					
m,p-Xylenes		7.68 D	0.998					
o-Xylene		0.328	0.00199					
Total Xylenes		8.01	0.00199					
Total BTEX		8.13	0.00199					
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 16:45						
	Analyzed:	Mar-14-19 09:40						
	Units/RL:	mg/kg	RL					
Chloride		<4.96	4.96					
TPH by SW8015 Mod	***Extracted:***	Mar-13-19 15:00						
	Analyzed:	Mar-14-19 02:07						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		234	15.0					
Diesel Range Organics (DRO)		1160	15.0					
Motor Oil Range Hydrocarbons (MRO)		127	15.0					
Total TPH		1520	15.0					

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-001	Date Collected:	03.11.19 17.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.13.19 20.17	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**607**	14.9	mg/kg	03.13.19 21.31		1
Diesel Range Organics (DRO)	C10C28DRO	**1710**	14.9	mg/kg	03.13.19 21.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**190**	14.9	mg/kg	03.13.19 21.31		1
Total TPH	PHC635	**2510**	14.9	mg/kg	03.13.19 21.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	03.13.19 21.31	
o-Terphenyl	84-15-1	128	%	70-135	03.13.19 21.31	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-001	Date Collected:	03.11.19 17.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0286**	0.00199	mg/kg	03.14.19 05.27		1
Toluene	108-88-3	**5.08**	0.501	mg/kg	03.14.19 10.33	D	250
Ethylbenzene	100-41-4	**1.07**	0.501	mg/kg	03.14.19 10.33	D	250
m,p-Xylenes	179601-23-1	**2.42**	1.00	mg/kg	03.14.19 10.33	D	250
o-Xylene	95-47-6	**8.26**	0.501	mg/kg	03.14.19 10.33	D	250
Total Xylenes	1330-20-7	**10.7**	0.501	mg/kg	03.14.19 10.33		250
Total BTEX		**16.9**	0.00199	mg/kg	03.14.19 10.33		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	723	%	70-130	03.14.19 05.27	**
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.14.19 05.27	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-002	Date Collected:	03.11.19 17.05	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.13.19 20.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**621**	15.0	mg/kg	03.13.19 21.51		1
Diesel Range Organics (DRO)	C10C28DRO	**2290**	15.0	mg/kg	03.13.19 21.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**249**	15.0	mg/kg	03.13.19 21.51		1
Total TPH	PHC635	**3160**	15.0	mg/kg	03.13.19 21.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	03.13.19 21.51	
o-Terphenyl	84-15-1	124	%	70-135	03.13.19 21.51	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-002	Date Collected:	03.11.19 17.05	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0379**	0.00199	mg/kg	03.14.19 05.08		1
Toluene	108-88-3	**4.79**	0.498	mg/kg	03.14.19 10.52	D	250
Ethylbenzene	100-41-4	**0.954**	0.498	mg/kg	03.14.19 10.52	D	250
m,p-Xylenes	179601-23-1	**2.19**	0.996	mg/kg	03.14.19 10.52	D	250
o-Xylene	95-47-6	**7.49**	0.498	mg/kg	03.14.19 10.52	D	250
Total Xylenes	1330-20-7	**9.68**	0.498	mg/kg	03.14.19 10.52		250
Total BTEX		**15.5**	0.00199	mg/kg	03.14.19 10.52		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	132	%	70-130	03.14.19 05.08	**
4-Bromofluorobenzene	460-00-4	650	%	70-130	03.14.19 05.08	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-003	Date Collected:	03.11.19 17.10	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.13.19 20.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**271**	15.0	mg/kg	03.13.19 22.11		1
Diesel Range Organics (DRO)	C10C28DRO	**1170**	15.0	mg/kg	03.13.19 22.11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**133**	15.0	mg/kg	03.13.19 22.11		1
Total TPH	PHC635	**1570**	15.0	mg/kg	03.13.19 22.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.13.19 22.11	
o-Terphenyl	84-15-1	116	%	70-135	03.13.19 22.11	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-003	Date Collected:	03.11.19 17.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00807**	0.00200	mg/kg	03.14.19 00.44		1
Toluene	108-88-3	**0.208**	0.00200	mg/kg	03.14.19 00.44		1
Ethylbenzene	100-41-4	<0.499	0.499	mg/kg	03.14.19 11.11	UD	250
m,p-Xylenes	179601-23-1	<0.998	0.998	mg/kg	03.14.19 11.11	UD	250
o-Xylene	95-47-6	**0.358**	0.00200	mg/kg	03.14.19 00.44		1
Total Xylenes	1330-20-7	**0.358**	0.00200	mg/kg	03.14.19 11.11		250
Total BTEX		**0.574**	0.00200	mg/kg	03.14.19 11.11		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.14.19 00.44	
4-Bromofluorobenzene	460-00-4	128	%	70-130	03.14.19 00.44	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-004	Date Collected:	03.11.19 17.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.13.19 21.02	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1030**	15.0	mg/kg	03.13.19 22.31		1
Diesel Range Organics (DRO)	C10C28DRO	**3080**	15.0	mg/kg	03.13.19 22.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**298**	15.0	mg/kg	03.13.19 22.31		1
Total TPH	PHC635	**4410**	15.0	mg/kg	03.13.19 22.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	03.13.19 22.31	
o-Terphenyl	84-15-1	129	%	70-135	03.13.19 22.31	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-004	Date Collected:	03.11.19 17.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0600**	0.00201	mg/kg	03.14.19 00.25		1
Toluene	108-88-3	**8.89**	0.503	mg/kg	03.14.19 12.25	D	250
Ethylbenzene	100-41-4	**1.28**	0.503	mg/kg	03.14.19 12.25	D	250
m,p-Xylenes	179601-23-1	**37.9**	1.01	mg/kg	03.14.19 12.25	D	250
o-Xylene	95-47-6	**0.398**	0.00201	mg/kg	03.14.19 00.25		1
Total Xylenes	1330-20-7	**38.3**	0.00201	mg/kg	03.14.19 12.25		250
Total BTEX		**48.5**	0.00201	mg/kg	03.14.19 12.25		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	61	%	70-130	03.14.19 00.25	**
4-Bromofluorobenzene	460-00-4	460	%	70-130	03.14.19 00.25	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-005	Date Collected:	03.11.19 17.20	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.13.19 21.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1440**	15.0	mg/kg	03.13.19 22.51		1
Diesel Range Organics (DRO)	C10C28DRO	**3770**	15.0	mg/kg	03.13.19 22.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**362**	15.0	mg/kg	03.13.19 22.51		1
Total TPH	PHC635	**5570**	15.0	mg/kg	03.13.19 22.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	03.13.19 22.51	
o-Terphenyl	84-15-1	148	%	70-135	03.13.19 22.51	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-005	Date Collected:	03.11.19 17.20	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0841**	0.00200	mg/kg	03.14.19 00.06		1
Toluene	108-88-3	**14.0**	0.501	mg/kg	03.14.19 12.44	D	250
Ethylbenzene	100-41-4	**22.3**	0.501	mg/kg	03.14.19 12.44	D	250
m,p-Xylenes	179601-23-1	**57.1**	1.00	mg/kg	03.14.19 12.44	D	250
o-Xylene	95-47-6	**0.368**	0.00200	mg/kg	03.14.19 00.06		1
Total Xylenes	1330-20-7	**57.5**	0.00200	mg/kg	03.14.19 12.44		250
Total BTEX		**93.9**	0.00200	mg/kg	03.14.19 12.44		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	03.14.19 00.06	
1,4-Difluorobenzene	540-36-3	82	%	70-130	03.14.19 00.06	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-006	Date Collected:	03.11.19 17.25	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.13.19 21.15	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**949**	15.0	mg/kg	03.13.19 23.10		1
Diesel Range Organics (DRO)	C10C28DRO	**3180**	15.0	mg/kg	03.13.19 23.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**303**	15.0	mg/kg	03.13.19 23.10		1
Total TPH	PHC635	**4430**	15.0	mg/kg	03.13.19 23.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.13.19 23.10	
o-Terphenyl	84-15-1	135	%	70-135	03.13.19 23.10	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-006	Date Collected:	03.11.19 17.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0402**	0.00202	mg/kg	03.13.19 23.47		1
Toluene	108-88-3	**6.06**	0.498	mg/kg	03.14.19 13.03	D	250
Ethylbenzene	100-41-4	**0.911**	0.498	mg/kg	03.14.19 13.03	D	250
m,p-Xylenes	179601-23-1	**28.1**	0.996	mg/kg	03.14.19 13.03	D	250
o-Xylene	95-47-6	**7.45**	0.498	mg/kg	03.14.19 13.03	D	250
Total Xylenes	1330-20-7	**35.6**	0.498	mg/kg	03.14.19 13.03		250
Total BTEX		**42.6**	0.00202	mg/kg	03.14.19 13.03		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	543	%	70-130	03.13.19 23.47	**
1,4-Difluorobenzene	540-36-3	131	%	70-130	03.13.19 23.47	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-007	Date Collected:	03.11.19 17.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.13.19 21.22	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.13.19 23.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.13.19 23.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.13.19 23.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.13.19 23.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.13.19 23.30	
o-Terphenyl	84-15-1	88	%	70-135	03.13.19 23.30	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-007	Date Collected:	03.11.19 17.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.13.19 22.50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.13.19 22.50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.13.19 22.50	U	1
m,p-Xylenes	179601-23-1	**0.00457**	0.00397	mg/kg	03.13.19 22.50		1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.13.19 22.50	U	1
Total Xylenes	1330-20-7	**0.00457**	0.00198	mg/kg	03.13.19 22.50		1
Total BTEX		**0.00457**	0.00198	mg/kg	03.13.19 22.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.13.19 22.50	
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.13.19 22.50	

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-008	Date Collected:	03.11.19 17.35	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.13.19 21.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**796**	14.9	mg/kg	03.13.19 23.50		1
Diesel Range Organics (DRO)	C10C28DRO	**3100**	14.9	mg/kg	03.13.19 23.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**302**	14.9	mg/kg	03.13.19 23.50		1
Total TPH	PHC635	**4200**	14.9	mg/kg	03.13.19 23.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	03.13.19 23.50	
o-Terphenyl	84-15-1	132	%	70-135	03.13.19 23.50	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-008	Date Collected:	03.11.19 17.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0274**	0.00201	mg/kg	03.14.19 04.49		1
Toluene	108-88-3	**4.01**	0.496	mg/kg	03.14.19 13.22	D	250
Ethylbenzene	100-41-4	**0.531**	0.496	mg/kg	03.14.19 13.22	D	250
m,p-Xylenes	179601-23-1	**20.5**	0.992	mg/kg	03.14.19 13.22	D	250
o-Xylene	95-47-6	**5.54**	0.496	mg/kg	03.14.19 13.22	D	250
Total Xylenes	1330-20-7	**26.0**	0.496	mg/kg	03.14.19 13.22		250
Total BTEX		**30.6**	0.00201	mg/kg	03.14.19 13.22		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	03.14.19 04.49	
4-Bromofluorobenzene	460-00-4	720	%	70-130	03.14.19 04.49	**

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-009	Date Collected:	03.11.19 17.40	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.13.19 21.35	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1520**	74.9	mg/kg	03.14.19 06.21		5
Diesel Range Organics (DRO)	C10C28DRO	**5020**	74.9	mg/kg	03.14.19 06.21		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**575**	74.9	mg/kg	03.14.19 06.21		5
Total TPH	PHC635	**7120**	74.9	mg/kg	03.14.19 06.21		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	03.14.19 06.21	
o-Terphenyl	84-15-1	153	%	70-135	03.14.19 06.21	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-009	Date Collected:	03.11.19 17.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.101**	0.00200	mg/kg	03.14.19 04.30		1
Toluene	108-88-3	**5.02**	0.501	mg/kg	03.14.19 13.41	D	250
Ethylbenzene	100-41-4	**0.601**	0.501	mg/kg	03.14.19 13.41	D	250
m,p-Xylenes	179601-23-1	**26.5**	1.00	mg/kg	03.14.19 13.41	D	250
o-Xylene	95-47-6	**0.356**	0.00200	mg/kg	03.14.19 04.30		1
Total Xylenes	1330-20-7	**26.9**	0.00200	mg/kg	03.14.19 13.41		250
Total BTEX		**32.6**	0.00200	mg/kg	03.14.19 13.41		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	03.14.19 04.30	
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.14.19 04.30	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-010	Date Collected:	03.11.19 17.45	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 15.40	Basis:	Wet Weight
Seq Number:	3082059				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	03.13.19 21.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1570**	15.0	mg/kg	03.14.19 01.08		1
Diesel Range Organics (DRO)	C10C28DRO	**4970**	15.0	mg/kg	03.14.19 01.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**433**	15.0	mg/kg	03.14.19 01.08		1
Total TPH	PHC635	**6970**	15.0	mg/kg	03.14.19 01.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.14.19 01.08	
o-Terphenyl	84-15-1	172	%	70-135	03.14.19 01.08	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-010	Date Collected:	03.11.19 17.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0749**	0.00199	mg/kg	03.14.19 04.11		1
Toluene	108-88-3	**10.1**	0.502	mg/kg	03.14.19 14.17	D	250
Ethylbenzene	100-41-4	**17.6**	0.502	mg/kg	03.14.19 14.17	D	250
m,p-Xylenes	179601-23-1	**46.6**	1.00	mg/kg	03.14.19 14.17	D	250
o-Xylene	95-47-6	**0.370**	0.00199	mg/kg	03.14.19 04.11		1
Total Xylenes	1330-20-7	**47.0**	0.00199	mg/kg	03.14.19 14.17		250
Total BTEX		**74.7**	0.00199	mg/kg	03.14.19 14.17		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	72	%	70-130	03.14.19 04.11	
4-Bromofluorobenzene	460-00-4	131	%	70-130	03.14.19 04.11	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-011	Date Collected:	03.11.19 17.50	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 16.45	Basis:	Wet Weight
Seq Number:	3082131				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.14.19 09.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1200**	15.0	mg/kg	03.14.19 01.28		1
Diesel Range Organics (DRO)	C10C28DRO	**3870**	15.0	mg/kg	03.14.19 01.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**333**	15.0	mg/kg	03.14.19 01.28		1
Total TPH	PHC635	**5400**	15.0	mg/kg	03.14.19 01.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	03.14.19 01.28	
o-Terphenyl	84-15-1	147	%	70-135	03.14.19 01.28	**

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-011	Date Collected:	03.11.19 17.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0810**	0.00200	mg/kg	03.14.19 03.52		1
Toluene	108-88-3	**8.38**	0.496	mg/kg	03.14.19 14.36	D	250
Ethylbenzene	100-41-4	**15.4**	0.496	mg/kg	03.14.19 14.36	D	250
m,p-Xylenes	179601-23-1	**40.4**	0.992	mg/kg	03.14.19 14.36	D	250
o-Xylene	95-47-6	**0.372**	0.00200	mg/kg	03.14.19 03.52		1
Total Xylenes	1330-20-7	**40.8**	0.00200	mg/kg	03.14.19 14.36		250
Total BTEX		**64.6**	0.00200	mg/kg	03.14.19 14.36		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	03.14.19 03.52	
1,4-Difluorobenzene	540-36-3	85	%	70-130	03.14.19 03.52	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-012	Date Collected:	03.11.19 17.55	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 16.45	Basis:	Wet Weight
Seq Number:	3082131				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.14.19 09.34	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.14.19 01.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.3**	15.0	mg/kg	03.14.19 01.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.14.19 01.48	U	1
Total TPH	PHC635	**19.3**	15.0	mg/kg	03.14.19 01.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.14.19 01.48	
o-Terphenyl	84-15-1	87	%	70-135	03.14.19 01.48	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-012	Date Collected:	03.11.19 17.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.13.19 23.09	U	1
Toluene	108-88-3	**0.00382**	0.00201	mg/kg	03.13.19 23.09		1
Ethylbenzene	100-41-4	**0.00359**	0.00201	mg/kg	03.13.19 23.09		1
m,p-Xylenes	179601-23-1	**0.0104**	0.00402	mg/kg	03.13.19 23.09		1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.13.19 23.09	U	1
Total Xylenes	1330-20-7	**0.0104**	0.00201	mg/kg	03.13.19 23.09		1
Total BTEX		**0.0178**	0.00201	mg/kg	03.13.19 23.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.13.19 23.09	
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.13.19 23.09	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-013	Date Collected:	03.11.19 18.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.13.19 16.45	Basis:	Wet Weight
Seq Number:	3082131				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.14.19 09.40	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.13.19 15.00	Basis:	Wet Weight
Seq Number:	3082074				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**234**	15.0	mg/kg	03.14.19 02.07		1
Diesel Range Organics (DRO)	C10C28DRO	**1160**	15.0	mg/kg	03.14.19 02.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**127**	15.0	mg/kg	03.14.19 02.07		1
Total TPH	PHC635	**1520**	15.0	mg/kg	03.14.19 02.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.14.19 02.07	
o-Terphenyl	84-15-1	103	%	70-135	03.14.19 02.07	

Certificate of Analytical Results 617489

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	03.13.19 12.45
Lab Sample Id:	617489-013	Date Collected:	03.11.19 18.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.13.19 13.00	Basis:	Wet Weight
Seq Number:	3082173				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00282**	0.00199	mg/kg	03.13.19 23.28		1
Toluene	108-88-3	**0.120**	0.00199	mg/kg	03.13.19 23.28		1
Ethylbenzene	100-41-4	<0.499	0.499	mg/kg	03.14.19 15.14	UD	250
m,p-Xylenes	179601-23-1	**7.68**	0.998	mg/kg	03.14.19 15.14	D	250
o-Xylene	95-47-6	**0.328**	0.00199	mg/kg	03.13.19 23.28		1
Total Xylenes	1330-20-7	**8.01**	0.00199	mg/kg	03.14.19 15.14		250
Total BTEX		**8.13**	0.00199	mg/kg	03.14.19 15.14		250

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	8	%	70-130	03.13.19 23.28	**
4-Bromofluorobenzene	460-00-4	128	%	70-130	03.13.19 23.28	

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 617489

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673513-1-BLK LCS Sample Id: 7673513-1-BKS LCSD Sample Id: 7673513-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.21	250	257	103	261	104	90-110	2	20	mg/kg	03.13.19 18:33	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082131 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673515-1-BLK LCS Sample Id: 7673515-1-BKS LCSD Sample Id: 7673515-1-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	244	98	245	98	90-110	0	20	mg/kg	03.14.19 08:55	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617312-002 MS Sample Id: 617312-002 S MSD Sample Id: 617312-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.16	251	258	100	256	99	90-110	1	20	mg/kg	03.13.19 18:52	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082059 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617489-001 MS Sample Id: 617489-001 S MSD Sample Id: 617489-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.08	252	281	111	289	114	90-110	3	20	mg/kg	03.13.19 20:23	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082131 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617489-011 MS Sample Id: 617489-011 S MSD Sample Id: 617489-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.17	250	283	113	265	106	90-110	7	20	mg/kg	03.14.19 09:22	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 617489

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082131 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617505-002 MS Sample Id: 617505-002 S MSD Sample Id: 617505-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	134	248	386	102	378	98	90-110	2	20	mg/kg	03.14.19 10:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082074 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673530-1-BLK LCS Sample Id: 7673530-1-BKS LCSD Sample Id: 7673530-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1090	109	1040	104	70-135	5	20	mg/kg	03.13.19 19:52	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1120	112	70-135	2	20	mg/kg	03.13.19 19:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		124		126		70-135	%	03.13.19 19:52
o-Terphenyl	107		113		117		70-135	%	03.13.19 19:52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082074 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617488-001 MS Sample Id: 617488-001 S MSD Sample Id: 617488-001 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)	8.43	999	1070	106	1090	108	70-135	2	20	mg/kg	03.13.19 20:52	
Diesel Range Organics (DRO)	<8.12	999	1110	111	1120	112	70-135	1	20	mg/kg	03.13.19 20:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		122		70-135	%	03.13.19 20:52
o-Terphenyl	107		105		70-135	%	03.13.19 20:52

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

QC Summary 617489

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3082109 | Matrix: Solid | Date Prep: 03.13.19
MB Sample Id: 7673557-1-BLK | LCS Sample Id: 7673557-1-BKS | LCSD Sample Id: 7673557-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.105	104	0.103	103	70-130	2	35	mg/kg	03.13.19 20:39	
Toluene	<0.000458	0.101	0.0996	99	0.0982	98	70-130	1	35	mg/kg	03.13.19 20:39	
Ethylbenzene	<0.000568	0.101	0.113	112	0.113	113	70-130	0	35	mg/kg	03.13.19 20:39	
m,p-Xylenes	<0.00102	0.201	0.220	109	0.220	109	70-130	0	35	mg/kg	03.13.19 20:39	
o-Xylene	<0.000346	0.101	0.108	107	0.107	107	70-130	1	35	mg/kg	03.13.19 20:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		90		88		70-130	%	03.13.19 20:39
4-Bromofluorobenzene	108		104		104		70-130	%	03.13.19 20:39

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3082173 | Matrix: Solid | Date Prep: 03.13.19
MB Sample Id: 7673582-1-BLK | LCS Sample Id: 7673582-1-BKS | LCSD Sample Id: 7673582-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0995	100	0.0994	100	70-130	0	35	mg/kg	03.14.19 06:23	
Toluene	<0.000457	0.100	0.0938	94	0.0935	94	70-130	0	35	mg/kg	03.14.19 06:23	
Ethylbenzene	<0.000566	0.100	0.107	107	0.106	107	70-130	1	35	mg/kg	03.14.19 06:23	
m,p-Xylenes	<0.00102	0.200	0.205	103	0.204	103	70-130	0	35	mg/kg	03.14.19 06:23	
o-Xylene	<0.000345	0.100	0.103	103	0.103	104	70-130	0	35	mg/kg	03.14.19 06:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		89		89		70-130	%	03.14.19 06:23
4-Bromofluorobenzene	100		108		108		70-130	%	03.14.19 06:23

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3082109 | Matrix: Soil | Date Prep: 03.13.19
Parent Sample Id: 617488-001 | MS Sample Id: 617488-001 S | MSD Sample Id: 617488-001 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	0.0984	98	0.0953	94	70-130	3	35	mg/kg	03.13.19 21:17	
Toluene	<0.000457	0.100	0.0929	93	0.0895	89	70-130	4	35	mg/kg	03.13.19 21:17	
Ethylbenzene	<0.000566	0.100	0.103	103	0.0997	99	70-130	3	35	mg/kg	03.13.19 21:17	
m,p-Xylenes	0.00132	0.200	0.201	100	0.195	96	70-130	3	35	mg/kg	03.13.19 21:17	
o-Xylene	<0.000345	0.100	0.0974	97	0.0951	94	70-130	2	35	mg/kg	03.13.19 21:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		91		70-130	%	03.13.19 21:17
4-Bromofluorobenzene	104		105		70-130	%	03.13.19 21:17

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

QC Summary 617489

LT Environmental, Inc.

PLU CVX JV RB 001H

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

Seq Number: 3082173 Matrix: Soil Date Prep: 03.13.19

Parent Sample Id: 616724-001 MS Sample Id: 616724-001 S MSD Sample Id: 616724-001 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	0.0997	100	0.0771	76	70-130	26	35	mg/kg	03.14.19 07:01	
Toluene	0.000588	0.100	0.0881	88	0.0713	70	70-130	21	35	mg/kg	03.14.19 07:01	
Ethylbenzene	0.000628	0.100	0.0897	89	0.0733	72	70-130	20	35	mg/kg	03.14.19 07:01	
m,p-Xylenes	0.00195	0.200	0.172	85	0.144	71	70-130	18	35	mg/kg	03.14.19 07:01	
o-Xylene	<0.000345	0.100	0.0873	87	0.0737	73	70-130	17	35	mg/kg	03.14.19 07:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		91		70-130	%	03.14.19 07:01
4-Bromofluorobenzene	110		112		70-130	%	03.14.19 07:01

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: 617489

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
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	~~bbelill@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 CVX JV RB 001H	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP5185	Rush:	same day
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	5.8/5.7	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 0=8021)	Chloride (EPA 300.0)
FS03	S	3/11/19	1700	4'	1			
FS04	S		1705	4'	1			
FS05	S		1710	4'	1			
FS06	S		1715	4'	1			
FS07	S		1720	4'	1			
FS08	S		1725	4'	1			
FS09	S		1730	4'	1			
FS10	S		1735	4'	1			
FS11	S		1740	4'	1			
FS12	S		1745	4	1			

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		3/11/19 1650			
2						
3						
4						
5						
6						

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

Work Order No: 617489

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email: ~~bbelill@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 CVX JV RB ODH	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP5185	Rush: same day	
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	5.8/5.7	Thermometer ID	78	
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)
FS13	S	3/11/19	1750	4'	1	X	X	X
FS14	S	3/11/19	1755	4'	1	X	X	X
FS15	S	3/11/19	1800	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

03/11/2019

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		3/11/19 1000	2		3/13/19 1245
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/13/2019 12:45:00 PM

Work Order #: 617489

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)?	5.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/13/2019

Checklist reviewed by: Jessica Kramer Date: 03/13/2019

Analytical Report 617903

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

19-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

19-MAR-19

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

Reference: XENCO Report No(s): **617903**
PLU CVX JV RB 001H
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) 617903. 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. 617903 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW21	S	03-14-19 09:05	0 - 4.5 ft	617903-001
SW22	S	03-14-19 09:10	0 - 4.5 ft	617903-002
SW23	S	03-14-19 14:40	0 - 4.5 ft	617903-003
SW24	S	03-14-19 14:45	0 - 4.5 ft	617903-004
SW25	S	03-14-19 15:50	0 - 4.5 ft	617903-005
SW26	S	03-14-19 16:55	0 - 4.5 ft	617903-006

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082537 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3082542 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 617903

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

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

Analysis Requested													
	Lab Id:	617903-001		617903-002		617903-003		617903-004		617903-005		617903-006	
	Field Id:	SW21		SW22		SW23		SW24		SW25		SW26	
	Depth:	0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-14-19 09:05		Mar-14-19 09:10		Mar-14-19 14:40		Mar-14-19 14:45		Mar-14-19 15:50		Mar-14-19 16:55	
BTEX by EPA 8021B	***Extracted:***	Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 08:30		Mar-18-19 09:15	
	Analyzed:	Mar-18-19 18:16		Mar-18-19 18:35		Mar-18-19 18:54		Mar-18-19 19:13		Mar-18-19 19:32		Mar-18-19 22:20	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:00		Mar-18-19 12:15	
	Analyzed:	Mar-18-19 17:13		Mar-18-19 17:19		Mar-18-19 17:25		Mar-18-19 17:31		Mar-18-19 17:37		Mar-18-19 18:13	
	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	<5.00	5.00	<5.00	5.00	<4.96	4.96	<5.00	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 09:00		Mar-18-19 11:00	
	Analyzed:	Mar-18-19 17:08		Mar-18-19 17:27		Mar-18-19 17:47		Mar-18-19 18:06		Mar-18-19 18:26		Mar-19-19 14:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	42.6	15.0	22.2	15.0	38.1	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	42.6	15.0	22.2	15.0	38.1	15.0	<15.0	15.0

Kalei Stout
Midland Laboratory Director

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id: **SW21** Matrix: Soil Date Received:03.18.19 07.45

Lab Sample Id: 617903-001 Date Collected: 03.14.19 09.05 Sample Depth: 0 - 4.5 ft

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

Tech: CHE % Moisture:

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

Seq Number: 3082553

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.18.19 17.13	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

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

Seq Number: 3082527

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 17.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 17.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 17.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.18.19 17.08	
o-Terphenyl	84-15-1	85	%	70-135	03.18.19 17.08	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW21**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-001	Date Collected:	03.14.19 09.05	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.18.19 18.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 18.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	03.18.19 18.16	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 18.16	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW22**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-002	Date Collected:	03.14.19 09.10	Sample Depth:	0 - 4.5 ft

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.18.19 17.19	U	1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 17.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.18.19 17.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 17.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.18.19 17.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.18.19 17.27	
o-Terphenyl	84-15-1	82	%	70-135	03.18.19 17.27	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW22**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-002	Date Collected:	03.14.19 09.10	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.18.19 18.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.18.19 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 18.35	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.18.19 18.35	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW23**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-003	Date Collected:	03.14.19 14.40	Sample Depth:	0 - 4.5 ft

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.18.19 17.25	U	1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 17.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.6**	15.0	mg/kg	03.18.19 17.47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 17.47	U	1
Total TPH	PHC635	**42.6**	15.0	mg/kg	03.18.19 17.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 17.47	
o-Terphenyl	84-15-1	90	%	70-135	03.18.19 17.47	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW23**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-003	Date Collected:	03.14.19 14.40	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.18.19 18.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.18.19 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 18.54	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.18.19 18.54	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW24**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-004	Date Collected:	03.14.19 14.45	Sample Depth:	0 - 4.5 ft

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.18.19 17.31	U	1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 18.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.2**	15.0	mg/kg	03.18.19 18.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 18.06	U	1
Total TPH	PHC635	**22.2**	15.0	mg/kg	03.18.19 18.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.18.19 18.06	
o-Terphenyl	84-15-1	87	%	70-135	03.18.19 18.06	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW24**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-004	Date Collected:	03.14.19 14.45	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.18.19 19.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.18.19 19.13	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.18.19 19.13	

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id: **SW25** Matrix: Soil Date Received:03.18.19 07.45
Lab Sample Id: 617903-005 Date Collected: 03.14.19 15.50 Sample Depth: 0 - 4.5 ft

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.18.19 17.37	U	1

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.18.19 18.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.1**	15.0	mg/kg	03.18.19 18.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.18.19 18.26	U	1
Total TPH	PHC635	**38.1**	15.0	mg/kg	03.18.19 18.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.18.19 18.26	
o-Terphenyl	84-15-1	100	%	70-135	03.18.19 18.26	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW25**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-005	Date Collected:	03.14.19 15.50	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 08.30	Basis:	Wet Weight
Seq Number:	3082537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.18.19 19.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.18.19 19.32	
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.18.19 19.32	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW26**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-006	Date Collected:	03.14.19 16.55	Sample Depth:	0 - 4.5 ft

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.18.19 18.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.18.19 11.00	Basis:	Wet Weight
Seq Number:	3082635				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 14.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 14.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 14.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 14.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.19.19 14.33	
o-Terphenyl	84-15-1	99	%	70-135	03.19.19 14.33	

Certificate of Analytical Results 617903

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW26**	Matrix:	Soil	Date Received:	03.18.19 07.45
Lab Sample Id:	617903-006	Date Collected:	03.14.19 16.55	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.18.19 09.15	Basis:	Wet Weight
Seq Number:	3082542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.18.19 22.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.18.19 22.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.18.19 22.20	
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.18.19 22.20	

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 617903

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082553 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673780-1-BLK LCS Sample Id: 7673780-1-BKS LCSD Sample Id: 7673780-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	238	95	237	95	90-110	0	20	mg/kg	03.18.19 14:42	

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

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

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

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

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

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

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

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

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 617903

LT Environmental, Inc.

PLU CVX JV RB 001H

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

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

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

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082635 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673811-1-BLK LCS Sample Id: 7673811-1-BKS LCSD Sample Id: 7673811-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1040	104	1000	100	70-135	4	20	mg/kg	03.19.19 06:20	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	999	100	70-135	5	20	mg/kg	03.19.19 06:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		118		120		70-135	%	03.19.19 06:20
o-Terphenyl	94		103		104		70-135	%	03.19.19 06:20

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082527 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617901-001 MS Sample Id: 617901-001 S MSD Sample Id: 617901-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	929	93	954	96	70-135	3	20	mg/kg	03.18.19 11:17	
Diesel Range Organics (DRO)	8.45	997	924	92	954	95	70-135	3	20	mg/kg	03.18.19 11:17	

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

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 617903

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082635 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617911-001 MS Sample Id: 617911-001 S MSD Sample Id: 617911-001 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	950	95	1030	103	70-135	8	20	mg/kg	03.19.19 07:19	
Diesel Range Organics (DRO)	<8.12	999	953	95	1020	102	70-135	7	20	mg/kg	03.19.19 07:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		120		70-135	%	03.19.19 07:19
o-Terphenyl	96		102		70-135	%	03.19.19 07:19

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

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

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

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082542 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673822-1-BLK LCS Sample Id: 7673822-1-BKS LCSD Sample Id: 7673822-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.101	102	0.103	103	70-130	2	35	mg/kg	03.18.19 20:28	
Toluene	<0.000453	0.0994	0.108	109	0.111	111	70-130	3	35	mg/kg	03.18.19 20:28	
Ethylbenzene	<0.000561	0.0994	0.0999	101	0.102	102	70-130	2	35	mg/kg	03.18.19 20:28	
m,p-Xylenes	<0.00101	0.199	0.194	97	0.197	99	70-130	2	35	mg/kg	03.18.19 20:28	
o-Xylene	<0.000342	0.0994	0.0999	101	0.102	102	70-130	2	35	mg/kg	03.18.19 20:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		101		70-130	%	03.18.19 20:28
4-Bromofluorobenzene	109		106		107		70-130	%	03.18.19 20:28

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 617903

LT Environmental, Inc.

PLU CVX JV RB 001H

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

Seq Number: 3082537 Matrix: Soil Date Prep: 03.18.19

Parent Sample Id: 617901-001 MS Sample Id: 617901-001 S MSD Sample Id: 617901-001 SD

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

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

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

Seq Number: 3082542 Matrix: Soil Date Prep: 03.18.19

Parent Sample Id: 617903-006 MS Sample Id: 617903-006 S MSD Sample Id: 617903-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000461	0.0996	0.0997	100	0.0952	95	70-130	5	35	mg/kg	03.18.19 21:06	
Toluene	0.000681	0.0996	0.107	107	0.101	101	70-130	6	35	mg/kg	03.18.19 21:06	
Ethylbenzene	<0.000563	0.0996	0.0949	95	0.0901	90	70-130	5	35	mg/kg	03.18.19 21:06	
m,p-Xylenes	0.00116	0.199	0.188	94	0.179	89	70-130	5	35	mg/kg	03.18.19 21:06	
o-Xylene	0.000701	0.0996	0.0965	96	0.0916	91	70-130	5	35	mg/kg	03.18.19 21:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	03.18.19 21:06
4-Bromofluorobenzene	108		110		70-130	%	03.18.19 21:06

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

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

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

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 617903

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email: ~~bbelill@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 ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU CVX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP5185	Rush: same day	
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.0 | 1.9	Thermometer ID:	D8	
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 0=8021)	Chloride (EPA 300.0)
SW21	S	3/14/19	0905	0-4.5'	1			
SW22	S		0910		1			
SW23	S		1440		1			
SW24	S		1445		1			
SW25	S		1550		1			
SW26	S		1655		1			

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

03/14/19

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		3/14/19 0630	2	Timothy P. Elliott	3-15-19 / 10:12am
3			3/18/19 0745	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 JOB 620

Final 1.000

Page 23 of 24

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Work Order #: 617903

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 03/18/2019

Brianna Teel

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

Kalei Stout

Analytical Report 618084

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

20-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

20-MAR-19

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

Reference: XENCO Report No(s): **618084**
PLU CVX JV RB 001H
Project Address: ---

Adrian Baker:

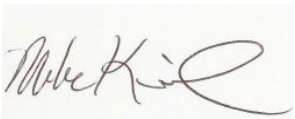
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618084. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 618084 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 618084

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW27	S	03-16-19 13:20	0 - 4.5 ft	618084-001
SW28	S	03-15-19 09:30	0 - 4.5 ft	618084-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082733 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 618084-001.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618084

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Tue Mar-19-19 12:20 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	618084-001		618084-002					
	Field Id:	SW27		SW28					
	Depth:	0-4.5 ft		0-4.5 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Mar-16-19 13:20		Mar-15-19 09:30					
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 13:00		Mar-19-19 13:00					
	Analyzed:	Mar-20-19 02:34		Mar-20-19 02:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199				
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 17:25		Mar-19-19 17:25					
	Analyzed:	Mar-19-19 18:18		Mar-19-19 18:36					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.05	5.05	<4.98	4.98				
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 17:00		Mar-19-19 17:00					
	Analyzed:	Mar-20-19 07:32		Mar-20-19 07:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

Mike Kimmel
Client Services Manager

Certificate of Analytical Results 618084

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW27**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618084-001	Date Collected:	03.16.19 13.20	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	03.19.19 18.18	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 07.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 07.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 07.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 07.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.20.19 07.32	
o-Terphenyl	84-15-1	94	%	70-135	03.20.19 07.32	

Certificate of Analytical Results 618084

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW27**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618084-001	Date Collected:	03.16.19 13.20	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 13.00	Basis:	Wet Weight
Seq Number:	3082733				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.20.19 02.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 02.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	181	%	70-130	03.20.19 02.34	**
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.20.19 02.34	

Certificate of Analytical Results 618084

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW28**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618084-002	Date Collected:	03.15.19 09.30	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.19.19 18.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 07.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 07.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 07.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 07.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.19 07.53	
o-Terphenyl	84-15-1	87	%	70-135	03.20.19 07.53	

Certificate of Analytical Results 618084

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW28**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618084-002	Date Collected:	03.15.19 09.30	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 13.00	Basis:	Wet Weight
Seq Number:	3082733				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.20.19 02.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.20.19 02.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.20.19 02.53	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.20.19 02.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 618084

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673875-1-BLK LCS Sample Id: 7673875-1-BKS LCSD Sample Id: 7673875-1-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	239	96	239	96	90-110	0	20	mg/kg	03.19.19 18:06	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618084-001 MS Sample Id: 618084-001 S MSD Sample Id: 618084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.983	253	248	98	249	98	90-110	0	20	mg/kg	03.19.19 18:24	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618087-002 MS Sample Id: 618087-002 S MSD Sample Id: 618087-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.60	250	248	98	250	99	90-110	1	20	mg/kg	03.19.19 19:49	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673881-1-BLK LCS Sample Id: 7673881-1-BKS LCSD Sample Id: 7673881-1-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	1030	103	978	98	70-135	5	20	mg/kg	03.20.19 01:53	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1010	101	70-135	4	20	mg/kg	03.20.19 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		121		111		70-135	%	03.20.19 01:53
o-Terphenyl	97		105		104		70-135	%	03.20.19 01:53

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 618084

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618088-001 MS Sample Id: 618088-001 S MSD Sample Id: 618088-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	915	92	927	93	70-135	1	20	mg/kg	03.20.19 02:54	
Diesel Range Organics (DRO)	22.1	998	955	93	981	96	70-135	3	20	mg/kg	03.20.19 02:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	03.20.19 02:54
o-Terphenyl	88		88		70-135	%	03.20.19 02:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082733 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673950-1-BLK LCS Sample Id: 7673950-1-BKS LCSD Sample Id: 7673950-1-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	0.120	120	0.121	120	70-130	1	35	mg/kg	03.19.19 19:02	
Toluene	<0.00200	0.0998	0.121	121	0.121	120	70-130	0	35	mg/kg	03.19.19 19:02	
Ethylbenzene	<0.000564	0.0998	0.107	107	0.107	106	70-130	0	35	mg/kg	03.19.19 19:02	
m,p-Xylenes	<0.00101	0.200	0.211	106	0.211	105	70-130	0	35	mg/kg	03.19.19 19:02	
o-Xylene	<0.00200	0.0998	0.106	106	0.106	105	70-130	0	35	mg/kg	03.19.19 19:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		107		109		70-130	%	03.19.19 19:02
4-Bromofluorobenzene	110		107		108		70-130	%	03.19.19 19:02

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082733 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 617507-001 MS Sample Id: 617507-001 S MSD Sample Id: 617507-001 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	0.0942	94	0.108	109	70-130	14	35	mg/kg	03.19.19 19:40	
Toluene	<0.00200	0.100	0.111	111	0.108	109	70-130	3	35	mg/kg	03.19.19 19:40	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.0915	92	70-130	4	35	mg/kg	03.19.19 19:40	
m,p-Xylenes	0.00461	0.200	0.195	95	0.180	88	70-130	8	35	mg/kg	03.19.19 19:40	
o-Xylene	<0.00200	0.100	0.100	100	0.0915	92	70-130	9	35	mg/kg	03.19.19 19:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		109		70-130	%	03.19.19 19:40
4-Bromofluorobenzene	126		112		70-130	%	03.19.19 19:40

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

Chain of Custody

Work Order No: 618084

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	~~bbelill@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 CVX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP 5185	Rush:	same day
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	4.1/4.0	Thermometer ID	
Received Intact:	(Yes) No		R8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW27	S	3/16/19	13:20	0-4.5'	1	X	X	X
SW28	S	3/15/19	09:30	0-4.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Robert Mc	03/16/19 1600	2	Robert Mc	3/18/19 10:00
3			3/19/19 1220	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 33174062

Final 1.000

Page 13 of 14

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/19/2019 12:20:00 PM

Work Order #: 618084

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

Temperature Measuring device used : R8

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/19/2019

Checklist reviewed by: Kalei Stout Date: 03/19/2019

Analytical Report 618086

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

2RP5185

20-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

20-MAR-19

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

Reference: XENCO Report No(s): **618086**
PLU CVX JV RB 001H
Project Address: Eddy County

Adrian Baker:

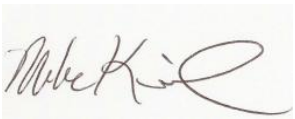
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618086. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 618086 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	03-15-19 00:00	8 ft	618086-001
BH01A	S	03-16-19 00:00	17.5 ft	618086-002
BH01B	S	03-16-19 00:00	21 ft	618086-003
BH01C	S	03-16-19 00:00	24 ft	618086-004
BH02	S	03-16-19 00:00	6.5 ft	618086-005
BH02A	S	03-16-19 00:00	10 ft	618086-006
BH02B	S	03-16-19 00:00	11 ft	618086-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082733 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 618086-001.

Batch: LBA-3082735 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: 618086-007.

Certificate of Analysis Summary 618086

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

Project Id: 2RP5185
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Tue Mar-19-19 12:20 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	618086-001		618086-002		618086-003		618086-004		618086-005		618086-006	
	Field Id:	BH01		BH01A		BH01B		BH01C		BH02		BH02A	
	Depth:	8- ft		17.5- ft		21- ft		24- ft		6.5- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 00:00		Mar-16-19 00:00		Mar-16-19 00:00		Mar-16-19 00:00		Mar-16-19 00:00		Mar-16-19 00:00	
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 13:00		Mar-19-19 13:00		Mar-19-19 13:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00	
	Analyzed:	Mar-20-19 03:12		Mar-20-19 03:31		Mar-20-19 03:50		Mar-20-19 06:38		Mar-20-19 06:57		Mar-20-19 07:16	
	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	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	0.00202	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00403	0.00403	0.0166	0.00402	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	0.00589	0.00200	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	0.0166	0.00201	0.00589	0.00200	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	0.0186	0.00201	0.00589	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25	
	Analyzed:	Mar-19-19 18:42		Mar-19-19 18:48		Mar-19-19 18:54		Mar-19-19 19:12		Mar-19-19 19:18		Mar-19-19 19:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.02	5.02	<5.00	5.00	11.2	4.99	9.57	5.01	<5.03	5.03	<4.99	4.99
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00	
	Analyzed:	Mar-20-19 08:13		Mar-20-19 08:32		Mar-20-19 08:52		Mar-20-19 09:12		Mar-20-19 09:32		Mar-20-19 09:52	
	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	23.0	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	45.1	14.9	63.9	15.0	230	14.9	185	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	46.1	14.9	38.3	15.0	<15.0	15.0
Total TPH		<15.0	15.0	45.1	14.9	63.9	15.0	299	14.9	223	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 618086

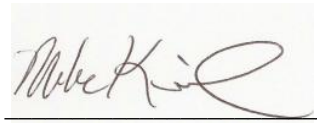
LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

Project Id: 2RP5185
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Tue Mar-19-19 12:20 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested							
	Lab Id:	618086-007					
	Field Id:	BH02B					
	Depth:	11- ft					
	Matrix:	SOIL					
	Sampled:	Mar-16-19 00:00					
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 15:00					
	Analyzed:	Mar-20-19 07:35					
	Units/RL:	mg/kg RL					
Benzene		<0.00198 0.00198					
Toluene		<0.00198 0.00198					
Ethylbenzene		<0.00198 0.00198					
m,p-Xylenes		<0.00397 0.00397					
o-Xylene		<0.00198 0.00198					
Total Xylenes		<0.00198 0.00198					
Total BTEX		<0.00198 0.00198					
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 17:25					
	Analyzed:	Mar-19-19 19:31					
	Units/RL:	mg/kg RL					
Chloride		<4.97 4.97					
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 17:00					
	Analyzed:	Mar-20-19 10:11					
	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					



Mike Kimmel
Client Services Manager

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-001	Date Collected:	03.15.19 00.00	Sample Depth:	8 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	03.19.19 18.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 08.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 08.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.19 08.13	
o-Terphenyl	84-15-1	86	%	70-135	03.20.19 08.13	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-001	Date Collected:	03.15.19 00.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 13.00	Basis:	Wet Weight
Seq Number:	3082733				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.20.19 03.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.20.19 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	123	%	70-130	03.20.19 03.12	
4-Bromofluorobenzene	460-00-4	64	%	70-130	03.20.19 03.12	**

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-002	Date Collected:	03.16.19 00.00	Sample Depth:	17.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.19.19 18.48	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.20.19 08.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**45.1**	14.9	mg/kg	03.20.19 08.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.20.19 08.32	U	1
Total TPH	PHC635	**45.1**	14.9	mg/kg	03.20.19 08.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.19 08.32	
o-Terphenyl	84-15-1	90	%	70-135	03.20.19 08.32	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-002	Date Collected:	03.16.19 00.00	Sample Depth:	17.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 13.00	Basis:	Wet Weight
Seq Number:	3082733				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.20.19 03.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 03.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	153	%	70-130	03.20.19 03.31	**
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.20.19 03.31	

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-003	Date Collected:	03.16.19 00.00	Sample Depth:	21 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.2**	4.99	mg/kg	03.19.19 18.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 08.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.9**	15.0	mg/kg	03.20.19 08.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 08.52	U	1
Total TPH	PHC635	**63.9**	15.0	mg/kg	03.20.19 08.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.19 08.52	
o-Terphenyl	84-15-1	89	%	70-135	03.20.19 08.52	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-003	Date Collected:	03.16.19 00.00	Sample Depth:	21 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 13.00	Basis:	Wet Weight
Seq Number:	3082733				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.20.19 03.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.20.19 03.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.20.19 03.50	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.20.19 03.50	

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-004	Date Collected:	03.16.19 00.00	Sample Depth:	24 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.57**	5.01	mg/kg	03.19.19 19.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**23.0**	14.9	mg/kg	03.20.19 09.12		1
Diesel Range Organics (DRO)	C10C28DRO	**230**	14.9	mg/kg	03.20.19 09.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**46.1**	14.9	mg/kg	03.20.19 09.12		1
Total TPH	PHC635	**299**	14.9	mg/kg	03.20.19 09.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.19 09.12	
o-Terphenyl	84-15-1	90	%	70-135	03.20.19 09.12	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH01C**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-004	Date Collected:	03.16.19 00.00	Sample Depth:	24 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 06.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 06.38	U	1
Ethylbenzene	100-41-4	**0.00202**	0.00201	mg/kg	03.20.19 06.38		1
m,p-Xylenes	179601-23-1	**0.0166**	0.00402	mg/kg	03.20.19 06.38		1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 06.38	U	1
Total Xylenes	1330-20-7	**0.0166**	0.00201	mg/kg	03.20.19 06.38		1
Total BTEX		**0.0186**	0.00201	mg/kg	03.20.19 06.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	03.20.19 06.38	
1,4-Difluorobenzene	540-36-3	96	%	70-130	03.20.19 06.38	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-005	Date Collected:	03.16.19 00.00	Sample Depth:	6.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.19.19 19.18	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 09.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**185**	15.0	mg/kg	03.20.19 09.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**38.3**	15.0	mg/kg	03.20.19 09.32		1
Total TPH	PHC635	**223**	15.0	mg/kg	03.20.19 09.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.20.19 09.32	
o-Terphenyl	84-15-1	111	%	70-135	03.20.19 09.32	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-005	Date Collected:	03.16.19 00.00	Sample Depth:	6.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 06.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 06.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 06.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.20.19 06.57	U	1
o-Xylene	95-47-6	**0.00589**	0.00200	mg/kg	03.20.19 06.57		1
Total Xylenes	1330-20-7	**0.00589**	0.00200	mg/kg	03.20.19 06.57		1
Total BTEX		**0.00589**	0.00200	mg/kg	03.20.19 06.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.20.19 06.57	
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.20.19 06.57	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-006	Date Collected:	03.16.19 00.00	Sample Depth:	10 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.19.19 19.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 09.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 09.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 09.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 09.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.19 09.52	
o-Terphenyl	84-15-1	88	%	70-135	03.20.19 09.52	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-006	Date Collected:	03.16.19 00.00	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.20.19 07.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 07.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.20.19 07.16	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 07.16	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02B**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-007	Date Collected:	03.16.19 00.00	Sample Depth:	11 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.19.19 19.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 10.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 10.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 10.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 10.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.19 10.11	
o-Terphenyl	84-15-1	88	%	70-135	03.20.19 10.11	

Certificate of Analytical Results 618086

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**BH02B**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618086-007	Date Collected:	03.16.19 00.00	Sample Depth:	11 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.20.19 07.35	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.20.19 07.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.20.19 07.35	
4-Bromofluorobenzene	460-00-4	140	%	70-130	03.20.19 07.35	**

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 618086

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673875-1-BLK LCS Sample Id: 7673875-1-BKS LCSD Sample Id: 7673875-1-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	239	96	239	96	90-110	0	20	mg/kg	03.19.19 18:06	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618084-001 MS Sample Id: 618084-001 S MSD Sample Id: 618084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.983	253	248	98	249	98	90-110	0	20	mg/kg	03.19.19 18:24	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618087-002 MS Sample Id: 618087-002 S MSD Sample Id: 618087-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.60	250	248	98	250	99	90-110	1	20	mg/kg	03.19.19 19:49	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673881-1-BLK LCS Sample Id: 7673881-1-BKS LCSD Sample Id: 7673881-1-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	1030	103	978	98	70-135	5	20	mg/kg	03.20.19 01:53	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1010	101	70-135	4	20	mg/kg	03.20.19 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		121		111		70-135	%	03.20.19 01:53
o-Terphenyl	97		105		104		70-135	%	03.20.19 01:53

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 618086

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618088-001 MS Sample Id: 618088-001 S MSD Sample Id: 618088-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	915	92	927	93	70-135	1	20	mg/kg	03.20.19 02:54	
Diesel Range Organics (DRO)	22.1	998	955	93	981	96	70-135	3	20	mg/kg	03.20.19 02:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	03.20.19 02:54
o-Terphenyl	88		88		70-135	%	03.20.19 02:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082733 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673950-1-BLK LCS Sample Id: 7673950-1-BKS LCSD Sample Id: 7673950-1-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	0.120	120	0.121	120	70-130	1	35	mg/kg	03.19.19 19:02	
Toluene	<0.00200	0.0998	0.121	121	0.121	120	70-130	0	35	mg/kg	03.19.19 19:02	
Ethylbenzene	<0.000564	0.0998	0.107	107	0.107	106	70-130	0	35	mg/kg	03.19.19 19:02	
m,p-Xylenes	<0.00101	0.200	0.211	106	0.211	105	70-130	0	35	mg/kg	03.19.19 19:02	
o-Xylene	<0.00200	0.0998	0.106	106	0.106	105	70-130	0	35	mg/kg	03.19.19 19:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		107		109		70-130	%	03.19.19 19:02
4-Bromofluorobenzene	110		107		108		70-130	%	03.19.19 19:02

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082735 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673951-1-BLK LCS Sample Id: 7673951-1-BKS LCSD Sample Id: 7673951-1-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	0.119	119	0.113	113	70-130	5	35	mg/kg	03.20.19 04:46	
Toluene	<0.00199	0.0996	0.121	121	0.115	115	70-130	5	35	mg/kg	03.20.19 04:46	
Ethylbenzene	<0.000563	0.0996	0.106	106	0.101	101	70-130	5	35	mg/kg	03.20.19 04:46	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.197	99	70-130	2	35	mg/kg	03.20.19 04:46	
o-Xylene	<0.00199	0.0996	0.102	102	0.100	100	70-130	2	35	mg/kg	03.20.19 04:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		107		107		70-130	%	03.20.19 04:46
4-Bromofluorobenzene	115		105		106		70-130	%	03.20.19 04:46

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

QC Summary 618086

LT Environmental, Inc.

PLU CVX JV RB 001H

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

Seq Number: 3082733 Matrix: Soil Date Prep: 03.19.19

Parent Sample Id: 617507-001 MS Sample Id: 617507-001 S MSD Sample Id: 617507-001 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	0.0942	94	0.108	109	70-130	14	35	mg/kg	03.19.19 19:40	
Toluene	<0.00200	0.100	0.111	111	0.108	109	70-130	3	35	mg/kg	03.19.19 19:40	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.0915	92	70-130	4	35	mg/kg	03.19.19 19:40	
m,p-Xylenes	0.00461	0.200	0.195	95	0.180	88	70-130	8	35	mg/kg	03.19.19 19:40	
o-Xylene	<0.00200	0.100	0.100	100	0.0915	92	70-130	9	35	mg/kg	03.19.19 19:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		109		70-130	%	03.19.19 19:40
4-Bromofluorobenzene	126		112		70-130	%	03.19.19 19:40

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

Seq Number: 3082735 Matrix: Soil Date Prep: 03.19.19

Parent Sample Id: 618086-004 MS Sample Id: 618086-004 S MSD Sample Id: 618086-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.112	113	0.109	108	70-130	3	35	mg/kg	03.20.19 05:24	
Toluene	0.00178	0.0994	0.110	109	0.112	109	70-130	2	35	mg/kg	03.20.19 05:24	
Ethylbenzene	0.00202	0.0994	0.0937	92	0.0934	90	70-130	0	35	mg/kg	03.20.19 05:24	
m,p-Xylenes	0.0166	0.199	0.180	82	0.180	81	70-130	0	35	mg/kg	03.20.19 05:24	
o-Xylene	0.00174	0.0994	0.0916	90	0.0962	94	70-130	5	35	mg/kg	03.20.19 05:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.20.19 05:24
4-Bromofluorobenzene	122		120		70-130	%	03.20.19 05:24

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

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Xenco Quote #

Xenco Job # 619086

Client / Reporting Information

Company Name / Branch: Ltl 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 CVX JV RB ODIH

Project Location: Eddy County: 2RP 5185

Invoice To: XTO Energy, Kyle Littrell

PO Number: 2RP 5185

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	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX (only BTEX) 8021	TPH DRO GRO ARO) 8015	Chloride (300.00)	Field Comments
1	BH01	8'	3/15		S	1								X	X	X	X	
2	BH01A	17.5'	3/16		S	1								X	X	X	X	
3	BH01B	21'	3/16		S	1								X	X	X	X	
4	BH01C	24'	3/16		S	1								X	X	X	X	
5	BH02	6.5'	3/16		S	1								X	X	X	X	
6	BH02A	10'	3/16		S	1								X	X	X	X	
7	BH02B	11'	3/16		S	1								X	X	X	X	
8																		
9																		
10																		

Number of Containers / Preservative

Field Comments

Notes:

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

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	03/16/19 1600	1			
2				Robert Mc	3/19/19 10:00	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
		3/18 15:30	3 Robert			4
5	Relinquished By:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5 3/19/19 1220			✓ 4.1 / 4.0 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.

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Final 1.000

Page 25 of 26

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/19/2019 12:20:00 PM

Work Order #: 618086

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/19/2019

Checklist reviewed by: Kalei Stout Date: 03/19/2019

Analytical Report 618087

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

20-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

20-MAR-19

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

Reference: XENCO Report No(s): **618087**
PLU CVX JV RB 001H
Project Address: ---

Adrian Baker:

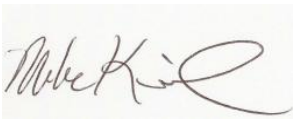
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618087. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 618087 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS05C	S	03-15-19 17:05	14 ft	618087-001
SS05D	S	03-15-19 17:08	16 ft	618087-002
SS05E	S	03-15-19 17:15	22 ft	618087-003
SS06C	S	03-15-19 15:45	16 ft	618087-004
SS06D	S	03-15-19 16:10	23 ft	618087-005
SS08A	S	03-15-19 16:50	12 ft	618087-006
SS08B	S	03-15-19 17:00	18 ft	618087-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082656 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 618087-004.

Batch: LBA-3082735 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 618087-001,618087-004,618087-005,618087-003.
Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 618087-004.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618087

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Tue Mar-19-19 12:18 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	618087-001		618087-002		618087-003		618087-004		618087-005		618087-006	
	Field Id:	SS05C		SS05D		SS05E		SS06C		SS06D		SS08A	
	Depth:	14- ft		16- ft		22- ft		16- ft		23- ft		12- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-15-19 17:05		Mar-15-19 17:08		Mar-15-19 17:15		Mar-15-19 15:45		Mar-15-19 16:10		Mar-15-19 16:50	
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00	
	Analyzed:	Mar-20-19 07:54		Mar-20-19 08:13		Mar-20-19 08:32		Mar-20-19 13:53		Mar-20-19 08:51		Mar-20-19 09:10	
	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	<0.00199	0.00199	<0.00200	0.00200	18.8	0.996	<0.00199	0.00199	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	8.07	0.996	<0.00199	0.00199	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	59.5	0.996	<0.00199	0.00199	<0.00201	0.00201
m,p-Xylenes		0.00634	0.00402	0.00778	0.00398	<0.00400	0.00400	162	1.99	<0.00398	0.00398	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	58.0	0.996	<0.00199	0.00199	<0.00201	0.00201
Total Xylenes		0.00634	0.00201	0.00778	0.00199	<0.00200	0.00200	220	0.996	<0.00199	0.00199	<0.00201	0.00201
Total BTEX		0.00634	0.00201	0.00778	0.00199	<0.00200	0.00200	306	0.996	<0.00199	0.00199	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25	
	Analyzed:	Mar-19-19 19:37		Mar-19-19 19:43		Mar-19-19 20:01		Mar-19-19 20:07		Mar-19-19 20:25		Mar-19-19 20:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.96	4.96	<4.99	4.99	<5.00	5.00	<4.96	4.96	<4.95	4.95	<5.00	5.00
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 14:00		Mar-19-19 14:00		Mar-19-19 14:00		Mar-19-19 14:00		Mar-19-19 14:00		Mar-19-19 14:00	
	Analyzed:	Mar-19-19 22:33		Mar-19-19 22:53		Mar-19-19 23:13		Mar-19-19 23:33		Mar-19-19 23:53		Mar-20-19 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	11800	74.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		100	15.0	112	15.0	<15.0	15.0	17400	74.9	93.5	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	17.0	15.0	<15.0	15.0	2340	74.9	18.5	15.0	<15.0	15.0
Total TPH		100	15.0	129	15.0	<15.0	15.0	31500	74.9	112	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 618087

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

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

Date Received in Lab: Tue Mar-19-19 12:18 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested							
	Lab Id:	618087-007					
	Field Id:	SS08B					
	Depth:	18- ft					
	Matrix:	SOIL					
	Sampled:	Mar-15-19 17:00					
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 15:00					
	Analyzed:	Mar-20-19 10:43					
	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:***	Mar-19-19 17:25					
	Analyzed:	Mar-19-19 20:37					
	Units/RL:	mg/kg RL					
Chloride		<5.02 5.02					
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 14:00					
	Analyzed:	Mar-20-19 00:33					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		37.7 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		37.7 15.0					

Mike Kimmel
Client Services Manager

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05C**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-001	Date Collected:	03.15.19 17.05	Sample Depth:	14 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.19.19 19.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 22.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**100**	15.0	mg/kg	03.19.19 22.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 22.33	U	1
Total TPH	PHC635	**100**	15.0	mg/kg	03.19.19 22.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 22.33	
o-Terphenyl	84-15-1	90	%	70-135	03.19.19 22.33	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05C**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-001	Date Collected:	03.15.19 17.05	Sample Depth:	14 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 07.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 07.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.20.19 07.54	U	1
m,p-Xylenes	179601-23-1	**0.00634**	0.00402	mg/kg	03.20.19 07.54		1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 07.54	U	1
Total Xylenes	1330-20-7	**0.00634**	0.00201	mg/kg	03.20.19 07.54		1
Total BTEX		**0.00634**	0.00201	mg/kg	03.20.19 07.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.20.19 07.54	
4-Bromofluorobenzene	460-00-4	137	%	70-130	03.20.19 07.54	**

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05D**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-002	Date Collected:	03.15.19 17.08	Sample Depth:	16 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.19.19 19.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 22.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**112**	15.0	mg/kg	03.19.19 22.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.0**	15.0	mg/kg	03.19.19 22.53		1
Total TPH	PHC635	**129**	15.0	mg/kg	03.19.19 22.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	03.19.19 22.53	
o-Terphenyl	84-15-1	82	%	70-135	03.19.19 22.53	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05D**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-002	Date Collected:	03.15.19 17.08	Sample Depth:	16 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.19 08.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.20.19 08.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.19 08.13	U	1
m,p-Xylenes	179601-23-1	**0.00778**	0.00398	mg/kg	03.20.19 08.13		1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.19 08.13	U	1
Total Xylenes	1330-20-7	**0.00778**	0.00199	mg/kg	03.20.19 08.13		1
Total BTEX		**0.00778**	0.00199	mg/kg	03.20.19 08.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.20.19 08.13	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.20.19 08.13	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05E**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-003	Date Collected:	03.15.19 17.15	Sample Depth:	22 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.19.19 20.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.19.19 23.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.19.19 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.19.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.19.19 23.13	
o-Terphenyl	84-15-1	88	%	70-135	03.19.19 23.13	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS05E**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-003	Date Collected:	03.15.19 17.15	Sample Depth:	22 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.20.19 08.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.20.19 08.32	
4-Bromofluorobenzene	460-00-4	143	%	70-130	03.20.19 08.32	**

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS06C**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-004	Date Collected:	03.15.19 15.45	Sample Depth:	16 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.19.19 20.07	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**11800**	74.9	mg/kg	03.19.19 23.33		5
Diesel Range Organics (DRO)	C10C28DRO	**17400**	74.9	mg/kg	03.19.19 23.33		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**2340**	74.9	mg/kg	03.19.19 23.33		5
Total TPH	PHC635	**31500**	74.9	mg/kg	03.19.19 23.33		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	03.19.19 23.33	
o-Terphenyl	84-15-1	210	%	70-135	03.19.19 23.33	**

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS06C**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-004	Date Collected:	03.15.19 15.45	Sample Depth:	16 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**18.8**	0.996	mg/kg	03.20.19 13.53		500
Toluene	108-88-3	**8.07**	0.996	mg/kg	03.20.19 13.53		500
Ethylbenzene	100-41-4	**59.5**	0.996	mg/kg	03.20.19 13.53		500
m,p-Xylenes	179601-23-1	**162**	1.99	mg/kg	03.20.19 13.53		500
o-Xylene	95-47-6	**58.0**	0.996	mg/kg	03.20.19 13.53		500
Total Xylenes	1330-20-7	**220**	0.996	mg/kg	03.20.19 13.53		500
Total BTEX		**306**	0.996	mg/kg	03.20.19 13.53		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	137	%	70-130	03.20.19 13.53	**
1,4-Difluorobenzene	540-36-3	135	%	70-130	03.20.19 13.53	**

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS06D**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-005	Date Collected:	03.15.19 16.10	Sample Depth:	23 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.19.19 20.25	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.19.19 23.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**93.5**	15.0	mg/kg	03.19.19 23.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.5**	15.0	mg/kg	03.19.19 23.53		1
Total TPH	PHC635	**112**	15.0	mg/kg	03.19.19 23.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.19.19 23.53	
o-Terphenyl	84-15-1	89	%	70-135	03.19.19 23.53	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS06D**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-005	Date Collected:	03.15.19 16.10	Sample Depth:	23 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.20.19 08.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.20.19 08.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	184	%	70-130	03.20.19 08.51	**
1,4-Difluorobenzene	540-36-3	126	%	70-130	03.20.19 08.51	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-006	Date Collected:	03.15.19 16.50	Sample Depth:	12 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.19.19 20.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 00.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 00.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 00.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.20.19 00.13	
o-Terphenyl	84-15-1	81	%	70-135	03.20.19 00.13	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS08A**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-006	Date Collected:	03.15.19 16.50	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.20.19 09.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.20.19 09.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.20.19 09.10	
4-Bromofluorobenzene	460-00-4	123	%	70-130	03.20.19 09.10	

Certificate of Analytical Results 618087

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS08B**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-007	Date Collected:	03.15.19 17.00	Sample Depth:	18 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	03.19.19 20.37	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 14.00	Basis:	Wet Weight
Seq Number:	3082656				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**37.7**	15.0	mg/kg	03.20.19 00.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 00.33	U	1
Total TPH	PHC635	**37.7**	15.0	mg/kg	03.20.19 00.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.19 00.33	
o-Terphenyl	84-15-1	87	%	70-135	03.20.19 00.33	

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SS08B**	Matrix:	Soil	Date Received:	03.19.19 12.18
Lab Sample Id:	618087-007	Date Collected:	03.15.19 17.00	Sample Depth:	18 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.20.19 10.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 10.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.20.19 10.43	
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.20.19 10.43	

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 618087

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673875-1-BLK LCS Sample Id: 7673875-1-BKS LCSD Sample Id: 7673875-1-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	239	96	239	96	90-110	0	20	mg/kg	03.19.19 18:06	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618084-001 MS Sample Id: 618084-001 S MSD Sample Id: 618084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.983	253	248	98	249	98	90-110	0	20	mg/kg	03.19.19 18:24	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618087-002 MS Sample Id: 618087-002 S MSD Sample Id: 618087-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.60	250	248	98	250	99	90-110	1	20	mg/kg	03.19.19 19:49	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082656 Matrix: Solid Date Prep: 03.18.19
MB Sample Id: 7673812-1-BLK LCS Sample Id: 7673812-1-BKS LCSD Sample Id: 7673812-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1090	109	1100	110	70-135	1	20	mg/kg	03.19.19 16:39	
Diesel Range Organics (DRO)	<8.13	1000	1130	113	1120	112	70-135	1	20	mg/kg	03.19.19 16:39	

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

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 618087

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082656 Matrix: Soil Date Prep: 03.18.19
Parent Sample Id: 617912-001 MS Sample Id: 617912-001 S MSD Sample Id: 617912-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.97	996	1010	101	1010	101	70-135	0	20	mg/kg	03.19.19 17:38	
Diesel Range Organics (DRO)	8.70	996	1030	103	1040	103	70-135	1	20	mg/kg	03.19.19 17:38	

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

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082735 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673951-1-BLK LCS Sample Id: 7673951-1-BKS LCSD Sample Id: 7673951-1-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	0.119	119	0.113	113	70-130	5	35	mg/kg	03.20.19 04:46	
Toluene	<0.00199	0.0996	0.121	121	0.115	115	70-130	5	35	mg/kg	03.20.19 04:46	
Ethylbenzene	<0.000563	0.0996	0.106	106	0.101	101	70-130	5	35	mg/kg	03.20.19 04:46	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.197	99	70-130	2	35	mg/kg	03.20.19 04:46	
o-Xylene	<0.00199	0.0996	0.102	102	0.100	100	70-130	2	35	mg/kg	03.20.19 04:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		107		107		70-130	%	03.20.19 04:46
4-Bromofluorobenzene	115		105		106		70-130	%	03.20.19 04:46

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082735 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618086-004 MS Sample Id: 618086-004 S MSD Sample Id: 618086-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.112	113	0.109	108	70-130	3	35	mg/kg	03.20.19 05:24	
Toluene	0.00178	0.0994	0.110	109	0.112	109	70-130	2	35	mg/kg	03.20.19 05:24	
Ethylbenzene	0.00202	0.0994	0.0937	92	0.0934	90	70-130	0	35	mg/kg	03.20.19 05:24	
m,p-Xylenes	0.0166	0.199	0.180	82	0.180	81	70-130	0	35	mg/kg	03.20.19 05:24	
o-Xylene	0.00174	0.0994	0.0916	90	0.0962	94	70-130	5	35	mg/kg	03.20.19 05:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.20.19 05:24
4-Bromofluorobenzene	122		120		70-130	%	03.20.19 05:24

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: 618087

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
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email: ~~bbelill@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 CVX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP 5185	Rush: same day	
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	4.1/4.0	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 0=8021)	Chloride (EPA 300.0)
SS05C		3/15/19	1705	14'	1			
SS05D			1708	16'	1			
SS05E			1715	22'	1			
SS06A			1545	16'	1			
SS06D			1610	23'	1			
SS08A			1650	12'	1			
SS08B			1700	18'	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	Robert McNeill	3/15/19 19:00	2 Robert McNeill		3/18/19 10:00
3			3/19/19 1220	4		
5				6		

Revised Date 051418 Rev. 2018.1

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Final 1.000

Page 24 of 25

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/19/2019 12:18:48 PM

Work Order #: 618087

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/19/2019

Checklist reviewed by: Kalei Stout Date: 03/19/2019

Analytical Report 618088

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV RB 001H

2RP-5185

20-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

20-MAR-19

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

Reference: XENCO Report No(s): **618088**
PLU CVX JV RB 001H
Project Address: --

Adrian Baker:

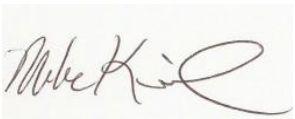
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618088. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 618088 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW29	S	03-16-19 09:10	0 - 4.5 ft	618088-001
SW30	S	03-16-19 09:15	0 - 4.5 ft	618088-002
SW31	S	03-16-19 09:20	0 - 4.5 ft	618088-003
SW32	S	03-16-19 09:25	0 - 4.5 ft	618088-004
SW33	S	03-16-19 09:30	0 - 4.5 ft	618088-005
SW34	S	03-16-19 09:35	0 - 4.5 ft	618088-006
SW35	S	03-16-19 08:45	0 - 4.5 ft	618088-007
SW36	S	03-16-19 08:50	0 - 4.5 ft	618088-008
SW37	S	03-16-19 08:55	0 - 4.5 ft	618088-009
SW38	S	03-16-19 09:00	0 - 4.5 ft	618088-010
SW39	S	03-16-19 09:05	0 - 4.5 ft	618088-011

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3082735 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3082772 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618088

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

Project Id: 2RP-5185
Contact: Adrian Baker
Project Location: --

Date Received in Lab: Tue Mar-19-19 12:20 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	618088-001		618088-002		618088-003		618088-004		618088-005		618088-006	
	Field Id:	SW29		SW30		SW31		SW32		SW33		SW34	
	Depth:	0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-16-19 09:10		Mar-16-19 09:15		Mar-16-19 09:20		Mar-16-19 09:25		Mar-16-19 09:30		Mar-16-19 09:35	
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00	
	Analyzed:	Mar-20-19 11:02		Mar-20-19 11:21		Mar-20-19 11:40		Mar-20-19 11:59		Mar-20-19 12:18		Mar-20-19 12:37	
	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	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
Toluene		<0.00200	0.00200	0.00231	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	0.00231	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 17:25		Mar-19-19 16:15		Mar-19-19 16:15	
	Analyzed:	Mar-19-19 20:43		Mar-19-19 20:49		Mar-19-19 20:55		Mar-19-19 21:01		Mar-20-19 09:16		Mar-20-19 09:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.97	4.97	<4.97	4.97	<5.00	5.00	<4.98	4.98	<4.95	4.95	8.74	4.99
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00	
	Analyzed:	Mar-20-19 02:34		Mar-20-19 03:33		Mar-20-19 03:53		Mar-20-19 04:13		Mar-20-19 04:33		Mar-20-19 04:53	
	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	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		22.1	15.0	<15.0	15.0	21.9	15.0	19.3	14.9	22.5	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		22.1	15.0	<15.0	15.0	21.9	15.0	19.3	14.9	22.5	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 618088

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV RB 001H

Project Id: 2RP-5185
Contact: Adrian Baker
Project Location: --

Date Received in Lab: Tue Mar-19-19 12:20 pm
Report Date: 20-MAR-19
Project Manager: Kalei Stout

Analysis Requested											
	Lab Id:	618088-007		618088-008		618088-009		618088-010		618088-011	
	Field Id:	SW35		SW36		SW37		SW38		SW39	
	Depth:	0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft		0-4.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-16-19 08:45		Mar-16-19 08:50		Mar-16-19 08:55		Mar-16-19 09:00		Mar-16-19 09:05	
BTEX by EPA 8021B	***Extracted:***	Mar-19-19 15:00		Mar-19-19 15:00		Mar-19-19 15:00		Mar-20-19 13:30		Mar-20-19 13:30	
	Analyzed:	Mar-20-19 12:56		Mar-20-19 13:15		Mar-20-19 13:34		Mar-20-19 16:46		Mar-20-19 17:05	
	Units/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	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	<0.00401	0.00401	<0.00401	0.00401	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Inorganic Anions by EPA 300	***Extracted:***	Mar-19-19 16:15		Mar-19-19 16:15		Mar-19-19 16:15		Mar-19-19 16:15		Mar-19-19 16:15	
	Analyzed:	Mar-20-19 09:40		Mar-20-19 09:46		Mar-20-19 09:52		Mar-20-19 10:09		Mar-20-19 10:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6.90	4.98	<5.03	5.03	<5.02	5.02	<4.95	4.95	5.81	4.95
TPH by SW8015 Mod	***Extracted:***	Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00		Mar-19-19 17:00	
	Analyzed:	Mar-20-19 05:13		Mar-20-19 05:33		Mar-20-19 05:53		Mar-20-19 06:13		Mar-20-19 07:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW29**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-001	Date Collected:	03.16.19 09.10	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.19.19 20.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 02.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.1**	15.0	mg/kg	03.20.19 02.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 02.34	U	1
Total TPH	PHC635	**22.1**	15.0	mg/kg	03.20.19 02.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.19 02.34	
o-Terphenyl	84-15-1	91	%	70-135	03.20.19 02.34	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW29**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-001	Date Collected:	03.16.19 09.10	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.20.19 11.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 11.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 11.02	
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.20.19 11.02	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW30**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-002	Date Collected:	03.16.19 09.15	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.19.19 20.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 03.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 03.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 03.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.19 03.33	
o-Terphenyl	84-15-1	91	%	70-135	03.20.19 03.33	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW30**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-002	Date Collected:	03.16.19 09.15	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.19 11.21	U	1
Toluene	108-88-3	**0.00231**	0.00199	mg/kg	03.20.19 11.21		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.19 11.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.20.19 11.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.19 11.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.20.19 11.21	U	1
Total BTEX		**0.00231**	0.00199	mg/kg	03.20.19 11.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.20.19 11.21	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 11.21	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW31**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-003	Date Collected:	03.16.19 09.20	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.19.19 20.55	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 03.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**21.9**	15.0	mg/kg	03.20.19 03.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 03.53	U	1
Total TPH	PHC635	**21.9**	15.0	mg/kg	03.20.19 03.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.19 03.53	
o-Terphenyl	84-15-1	90	%	70-135	03.20.19 03.53	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SW31**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-003	Date Collected:	03.16.19 09.20	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.20.19 11.40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.20.19 11.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.20.19 11.40	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 11.40	

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Sample Id:	**SW32**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-004	Date Collected:	03.16.19 09.25	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 17.25	Basis:	Wet Weight
Seq Number:	3082708				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.19.19 21.01	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.20.19 04.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.3**	14.9	mg/kg	03.20.19 04.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.20.19 04.13	U	1
Total TPH	PHC635	**19.3**	14.9	mg/kg	03.20.19 04.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.20.19 04.13	
o-Terphenyl	84-15-1	103	%	70-135	03.20.19 04.13	

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Sample Id:	**SW32**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-004	Date Collected:	03.16.19 09.25	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.20.19 11.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.20.19 11.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.20.19 11.59	
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.20.19 11.59	

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Sample Id:	**SW33**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-005	Date Collected:	03.16.19 09.30	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.19 09.16	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 04.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.5**	15.0	mg/kg	03.20.19 04.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 04.33	U	1
Total TPH	PHC635	**22.5**	15.0	mg/kg	03.20.19 04.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.19 04.33	
o-Terphenyl	84-15-1	90	%	70-135	03.20.19 04.33	

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Sample Id:	**SW33**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-005	Date Collected:	03.16.19 09.30	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.20.19 12.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.20.19 12.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 12.18	
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.20.19 12.18	

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Sample Id:	**SW34**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-006	Date Collected:	03.16.19 09.35	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.74**	4.99	mg/kg	03.20.19 09.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 04.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 04.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 04.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 04.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.19 04.53	
o-Terphenyl	84-15-1	91	%	70-135	03.20.19 04.53	

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Sample Id:	**SW34**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-006	Date Collected:	03.16.19 09.35	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.20.19 12.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.20.19 12.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 12.37	
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.20.19 12.37	

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Sample Id:	**SW35**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-007	Date Collected:	03.16.19 08.45	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.90**	4.98	mg/kg	03.20.19 09.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.20.19 05.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.20.19 05.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.20.19 05.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.20.19 05.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.20.19 05.13	
o-Terphenyl	84-15-1	91	%	70-135	03.20.19 05.13	

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Sample Id:	**SW35**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-007	Date Collected:	03.16.19 08.45	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.20.19 12.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 12.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.20.19 12.56	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.20.19 12.56	

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Sample Id:	**SW36**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-008	Date Collected:	03.16.19 08.50	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.20.19 09.46	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 05.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 05.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 05.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 05.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.19 05.33	
o-Terphenyl	84-15-1	91	%	70-135	03.20.19 05.33	

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Sample Id:	**SW36**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-008	Date Collected:	03.16.19 08.50	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.20.19 13.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 13.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.20.19 13.15	
1,4-Difluorobenzene	540-36-3	115	%	70-130	03.20.19 13.15	

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Sample Id:	**SW37**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-009	Date Collected:	03.16.19 08.55	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	03.20.19 09.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 05.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 05.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 05.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 05.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.19 05.53	
o-Terphenyl	84-15-1	88	%	70-135	03.20.19 05.53	

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Sample Id:	**SW37**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-009	Date Collected:	03.16.19 08.55	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.19.19 15.00	Basis:	Wet Weight
Seq Number:	3082735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.20.19 13.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.20.19 13.34	
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.20.19 13.34	

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PLU CVX JV RB 001H

Sample Id:	**SW38**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-010	Date Collected:	03.16.19 09.00	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.19 10.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 06.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 06.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 06.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 06.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.19 06.13	
o-Terphenyl	84-15-1	90	%	70-135	03.20.19 06.13	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW38**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-010	Date Collected:	03.16.19 09.00	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.20.19 13.30	Basis:	Wet Weight
Seq Number:	3082772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.20.19 16.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.20.19 16.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.20.19 16.46	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.20.19 16.46	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW39**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-011	Date Collected:	03.16.19 09.05	Sample Depth:	0 - 4.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.19.19 16.15	Basis:	Wet Weight
Seq Number:	3082707				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.81**	4.95	mg/kg	03.20.19 10.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.19.19 17.00	Basis:	Wet Weight
Seq Number:	3082726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.20.19 07.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.20.19 07.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.20.19 07.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.20.19 07.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.20.19 07.12	
o-Terphenyl	84-15-1	92	%	70-135	03.20.19 07.12	

Certificate of Analytical Results 618088

LT Environmental, Inc., Arvada, CO

PLU CVX JV RB 001H

Sample Id:	**SW39**	Matrix:	Soil	Date Received:	03.19.19 12.20
Lab Sample Id:	618088-011	Date Collected:	03.16.19 09.05	Sample Depth:	0 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.20.19 13.30	Basis:	Wet Weight
Seq Number:	3082772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.20.19 17.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.20.19 17.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.20.19 17.05	
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.20.19 17.05	

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 618088

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082707 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673874-1-BLK LCS Sample Id: 7673874-1-BKS LCSD Sample Id: 7673874-1-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	245	98	244	98	90-110	0	20	mg/kg	03.20.19 08:34	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673875-1-BLK LCS Sample Id: 7673875-1-BKS LCSD Sample Id: 7673875-1-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	239	96	239	96	90-110	0	20	mg/kg	03.19.19 18:06	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082707 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618088-005 MS Sample Id: 618088-005 S MSD Sample Id: 618088-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.00	248	244	98	243	97	90-110	0	20	mg/kg	03.20.19 09:22	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082707 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618088-011 MS Sample Id: 618088-011 S MSD Sample Id: 618088-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.81	248	242	95	243	96	90-110	0	20	mg/kg	03.20.19 10:44	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618084-001 MS Sample Id: 618084-001 S MSD Sample Id: 618084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.983	253	248	98	249	98	90-110	0	20	mg/kg	03.19.19 18:24	

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 618088

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082708 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618087-002 MS Sample Id: 618087-002 S MSD Sample Id: 618087-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.60	250	248	98	250	99	90-110	1	20	mg/kg	03.19.19 19:49	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Solid Date Prep: 03.19.19
MB Sample Id: 7673881-1-BLK LCS Sample Id: 7673881-1-BKS LCSD Sample Id: 7673881-1-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	1030	103	978	98	70-135	5	20	mg/kg	03.20.19 01:53	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1010	101	70-135	4	20	mg/kg	03.20.19 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		121		111		70-135	%	03.20.19 01:53
o-Terphenyl	97		105		104		70-135	%	03.20.19 01:53

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3082726 Matrix: Soil Date Prep: 03.19.19
Parent Sample Id: 618088-001 MS Sample Id: 618088-001 S MSD Sample Id: 618088-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	915	92	927	93	70-135	1	20	mg/kg	03.20.19 02:54	
Diesel Range Organics (DRO)	22.1	998	955	93	981	96	70-135	3	20	mg/kg	03.20.19 02:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	03.20.19 02:54
o-Terphenyl	88		88		70-135	%	03.20.19 02:54

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 618088

LT Environmental, Inc.

PLU CVX JV RB 001H

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082735 — Matrix: Solid — Date Prep: 03.19.19
MB Sample Id: 7673951-1-BLK — LCS Sample Id: 7673951-1-BKS — LCSD Sample Id: 7673951-1-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	0.119	119	0.113	113	70-130	5	35	mg/kg	03.20.19 04:46	
Toluene	<0.00199	0.0996	0.121	121	0.115	115	70-130	5	35	mg/kg	03.20.19 04:46	
Ethylbenzene	<0.000563	0.0996	0.106	106	0.101	101	70-130	5	35	mg/kg	03.20.19 04:46	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.197	99	70-130	2	35	mg/kg	03.20.19 04:46	
o-Xylene	<0.00199	0.0996	0.102	102	0.100	100	70-130	2	35	mg/kg	03.20.19 04:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		107		107		70-130	%	03.20.19 04:46
4-Bromofluorobenzene	115		105		106		70-130	%	03.20.19 04:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082772 — Matrix: Solid — Date Prep: 03.20.19
MB Sample Id: 7673968-1-BLK — LCS Sample Id: 7673968-1-BKS — LCSD Sample Id: 7673968-1-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	0.113	113	0.117	117	70-130	3	35	mg/kg	03.20.19 14:50	
Toluene	<0.00200	0.100	0.114	114	0.118	118	70-130	3	35	mg/kg	03.20.19 14:50	
Ethylbenzene	<0.000565	0.100	0.101	101	0.103	103	70-130	2	35	mg/kg	03.20.19 14:50	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.203	101	70-130	2	35	mg/kg	03.20.19 14:50	
o-Xylene	<0.00200	0.100	0.0992	99	0.102	102	70-130	3	35	mg/kg	03.20.19 14:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		108		109		70-130	%	03.20.19 14:50
4-Bromofluorobenzene	114		105		108		70-130	%	03.20.19 14:50

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3082735 — Matrix: Soil — Date Prep: 03.19.19
Parent Sample Id: 618086-004 — MS Sample Id: 618086-004 S — MSD Sample Id: 618086-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.112	113	0.109	108	70-130	3	35	mg/kg	03.20.19 05:24	
Toluene	0.00178	0.0994	0.110	109	0.112	109	70-130	2	35	mg/kg	03.20.19 05:24	
Ethylbenzene	0.00202	0.0994	0.0937	92	0.0934	90	70-130	0	35	mg/kg	03.20.19 05:24	
m,p-Xylenes	0.0166	0.199	0.180	82	0.180	81	70-130	0	35	mg/kg	03.20.19 05:24	
o-Xylene	0.00174	0.0994	0.0916	90	0.0962	94	70-130	5	35	mg/kg	03.20.19 05:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.20.19 05:24
4-Bromofluorobenzene	122		120		70-130	%	03.20.19 05:24

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 618088

LT Environmental, Inc.

PLU CVX JV RB 001H

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

Seq Number: 3082772 Matrix: Soil Date Prep: 03.20.19

Parent Sample Id: 618088-010 MS Sample Id: 618088-010 S MSD Sample Id: 618088-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.104	105	0.107	107	70-130	3	35	mg/kg	03.20.19 15:32	
Toluene	0.000601	0.0994	0.107	107	0.109	108	70-130	2	35	mg/kg	03.20.19 15:32	
Ethylbenzene	<0.000561	0.0994	0.0960	97	0.0944	94	70-130	2	35	mg/kg	03.20.19 15:32	
m,p-Xylenes	<0.00101	0.199	0.189	95	0.186	93	70-130	2	35	mg/kg	03.20.19 15:32	
o-Xylene	0.000391	0.0994	0.0955	96	0.0931	93	70-130	3	35	mg/kg	03.20.19 15:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		110		70-130	%	03.20.19 15:32
4-Bromofluorobenzene	113		111		70-130	%	03.20.19 15:32

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

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

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

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

Chain of Custody

Work Order No: 618088

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	~~bbelill@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 CVX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5185	Rush:	Same day
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.1/4.0	Thermometer ID		
Received Intact:	(Yes) No		RB	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW29	S	3/16/19	0910	0-4.5'	1			
SW30	S		0915		1			
SW31	S		0920		1			
SW32	S		0925		1			
SW33	S		0930		1			
SW34	S		0935		1			
SW35	S		0845		1			
SW36	S		0850		1			
SW37	S		0855		1			
SW38	S	↓	0900	↓	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	Roberto Martinez	3/16/19 1600	2 Roberto Martinez	Lauren Mayfield	3/19/19 10:00
3			3/19/19 1220	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 3317 4062

Final 1.000

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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: 618088

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 Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email: ~~bbelill@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 CVX JV RB 001H	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP 5185	Rush: same day	
Sampler's Name:	~~Benjamin Belill~~ Anna Byers	Due Date:	

SAMPLE RECEIPT				
Temperature (°C):	4.1 | 4.0	Temp Blank:	Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	R8	
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)
SW39	S	3/16/19	0905	0-4.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Roberto Martinez	3/16/19 1600	2	Robert Mullins	3/18/19 10:00
3			3/19/19 1220	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 33 A 4062

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/19/2019 12:20:00 PM

Work Order #: 618088

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/19/2019

Checklist reviewed by: Kalei Stout Date: 03/19/2019

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

Identifier:	Date:
SS04	3/1/19
Project Name:	**RP Number:**
PLU CVX JV RB 001H	2RP-5785

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
MAW	BACKHOE

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.248211, -103.887081	PID	NA	11

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SAND, RED BRN, MOIST, LOOSE, MED-FG, MOD ODOR, SURF STAIN
					1			
	458	440		SS04A	2			
					3			
	<78	792		SS04B	4		SC	SANDY CLAY, BRN, MOIST, LOOSE, MED-FG SAND, MOD ODOR, NO STAIN
					5			
	<78	1378		SS04C	6			
					7			
					8			
	—	800		SS04D	9			
					10			
		109		SS04E	11			CALICHE TD @ 11'
					12			

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Identifier:	Date:
SS05	3/1/19
Project Name:	**RP Number:**
PLU CVX JV RB 001H	2RP-5785
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MAW — Method: SPACE4000
Lat/Long: 32.248211, -103.887081 — Field Screening: PID	Hole Diameter: — Total Depth: 14

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SAND, RED BRN, MOIST, LOOSE, SURF STAIN, MOD ODOR
					1			
					2			
	528	1162		SS05A	3			
					4			
	528	1032		SS05B	5			
					6			
	—	1010		SS05C	7			SAME CLAY
					8			
	—	306		SS05D	9			
					10			
					11			
	528	710		SS05E	12			
	528	209		SS05F				CALICHE @ 12'

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Identifier:	Date:
SS05	3/1/19
Project Name: PLU CVX JV RB 001H	**RP Number:** 2RP-5785
Logged By: MAW	**Method:** BACKHOE
Hole Diameter:	**Total Depth:** 14'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.248211, -103.887081
Field Screening: PID
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	<24	1013			0 13 14 2 3 4 5 6 7 8 9 10 11 12			SAND, RED BRN, MOIST, LOOSE, MOD ODOR, NO STAIN - TD @ 14' bgs

2022

LT Environmental, Inc.		Identifier: SS06	Date: 3/1/19
508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Project Name: PLU CVX JV RB 001H	RP Number: 2RP-5185
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: MAW	Method: BACKHOE
Lat/Long: 32.248211, -103.887081	Field Screening: PID	Hole Diameter: NA	Total Depth: 16'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SAND, RED BRN, MOIST, LOOSE, MOD ODOR, NO STAIN, FG-MG
					1			
	—	707		SS06A	2			
					3			
	—	812		SS06B	4			some clay
					5			
	—	712		SS06C	6			
					7			
	—	778		SS06D	8			
					9			
					10			
	—	1157	—	SS06E	11			CALICHE
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: SS06	Date: 3/1/19
	Project Name: PLU CVX JV RB 001H	RP Number: 2RP-5185
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MAW	Method: BACKHOE
Lat/Long: 32.248211, -103.887081	Field Screening: PID	Hole Diameter: NA / Total Depth: 16'
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	–	685		SS06F	13			
	–	767		SS06G	16			TD @ 16'

LT Environmental, Inc.
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Identifier:	Date:
SS03	3/4/19
Project Name: PLU CVX JV RB 001H	RP Number: 2RP-5185
Logged By: MAW	Method: BACKHOE
Lat/Long: 32.248211, -103.887081	Field Screening: PID
Hole Diameter:	Total Depth: 16

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SAND, RED BRN, MOIST, LOOSE MOD ODOR / NO STAN, MED-FG SAND.
					1			
				SS03A	2			
	<78	1526			3			
				SS03B	4			
	-	963			5			
				SS03C	6			
	-	734			7			
					8			
					9			
				SS03D	10			CALICHE, CLOSE/BUFF, DRY, LOOSE, CLASTS GRAV-2", ODOR/NO ST.
	—	1137			11			
					12			
	-	872		SS03E				

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Identifier: SS03	Date: 3/4/19
Project Name: PLU CVX JV RB 001H	RP Number: 2RP-5185
Logged By: MAW	Method: BACKHOE
Hole Diameter:	Total Depth: 16'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.248211, -103.887081
Field Screening: PID
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
	-	153		SS03P	1			
					2			CLAY SANDY SILT
					3			
	<28	20		SS03G	16			TD @ 16'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: BH01	Date: 3/16/19
Project Name: PLU CVX JV RB GRAY H	RP Number: 2RP-5185
Logged By: Anna Byers	Method: Hand Auger
Hole Diameter: 3.5"	Total Depth: 24'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID & Cl⁻ test strips

Comments: Started borehole from an excavated bench at 8' bgs

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<200	>15000	Y	BH01	8	8'		moist, silt sand (c.), red brown, poorly graded, low plasticity; odor
					9			
					10			(note: 0-8' excavated soil same soil classification & description)
					11			
					12			
	<200	>15000			13			
D	<200	>15000			14			grey gravelly caliche, no plasticity, dry, well graded, odor
					15			
					16			
					17			
	<200	~~BH0~~ NO 2687	NO	BH01A	18	17.5'		
					19			
D					20			grey gravel caliche, (dry) no plasticity, well graded, odor

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Identifier: BH01	Date: 3/16/19
Project Name:	RP Number: 2RP 5185
Logged By:	Method: hand
Hole Diameter:	Total Depth:

Lat/Long:

Comments:

Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<200	310	N	BH01B	20			grey, finer sandier caliche, ~~no~~ odor, dry, well graded
					21	21'		
					22			
					23			
D	<200	205	N	BH01C	24	24'		grey, finer grained caliche (sandier (m.)), no odor, dry
					25			TOT DEPTH
					26			
					27			
					28			
					29			
					30			
					31			
					32			

LT Environmental, Inc.
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Identifier:	Date:
BH02	3/16/19
Project Name:	**RP Number:**
PLU CVX JV RBCA 1H	2RP-5185
Logged By: Anna Byers	**Method:** Hand Auger
Hole Diameter: 3.5"	**Total Depth:** 11.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID & Cl⁻ test strips

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			
					4			
					5			
-	EXCAVATED				6	-	-	moist red-brown silt sand (c.), low plasticity, poorly graded, odor & stained
M	<200	>15000	Y	BH02	7	6.5'		moist, red-brown silt sand (c.), low plasticity, poorly graded
	<200	>15000	N		8			
	<200	1258	N		9			
M	<200	310	N	BH02A	10	10'		
					11			
M	<200	54	N	BH02B	12	11.5'		TOT DEPTH

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Identifier: SS05	Date: 3/15/19
Project Name: PLU CVX JV RB COI H	RP Number: 2RP5085
Logged By: A. Byers	Method: Trach hoe
Hole Diameter: 2.5ft x 7'	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			red-brown sand, low plasticity, moist, (m.-c.) grain, odor
					1			
					2			
					3			Continuation of MW pothole - previously logged
D	<300	870	N	SS05C	14			caliche, dry no plasticity
					15			
D	<300	655	N	SS05D	16			
D	<300	648	N		17			
D	<300	830	N		18			
					19			
					20			
					21			
D	<300	730	N	SS05E	22			no odor

inc compactness
decrease grain size

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Compliance · Engineering · Remediation

Identifier: SS06	Date: 3/15/19
Project Name: PLU CVX JV RB 001H	RP Number: 2RP 5185
Logged By: A. Byers	Method: Track Hoe
Hole Diameter: 2.5ft x 7'	Total Depth: 23'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			
					4			
					5			Continuation of MW pothole & Previously Pothoked & Logged by MW
M	<200	>15000	N	SS06C	16			red brown silt sand (c.), poorly graded, low plasticity, moist; odor
					17			
M		8800			18			
					19			
D	<200	870	N		20			caliche, dry, grey, well graded sand to gravel size particles
					21			inc compactness & decrease grain size
D	<200	170	N		22			

<200 310 SS06D 23

TOT DEPTH

LT Environmental Inc.

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Compliance · Engineering · Remediation

		Identifier: SS08	Date: 3/15/19
		Project Name: PLU CVX JVRB COM 1	RP Number: 2RP 5185
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Trach Hoe
Lat/Long	Field Screening: PID & Cl⁻ test strips	Hole Diameter:	Total Depth:
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	* excavated *				0			red brown silt sand (c.), low plasticity, moist, odor, stained
	excavated				4'			
	excavated for bench				8	for bench		
D	<300	170	N	SS08A	12	SS08A 12'		red brown silt sand (c.), no plasticity, well graded, dry; odor
					13			
					14			
					15			
D	<300	330	N		16			caliche, grey, well graded, dry no plasticity, m. sand - gravel particle size
					17			
D	<300	210	N	SS08B	18	SS08B 18'		greyish brown sand, dry, no plasticity, poorly graded, no odor
					9			
					10			TOT DEPTH
					11			
					12			

Western view of the release area prior to excavation activities.

Project: 012919007	XTO Energy, Inc. Poker Lake Unit CVX JV RB 001H	LTE Advancing Opportunity
January 10, 2019	Photographic Log	

Western view of the final excavation extent.

Project: 012919007	XTO Energy, Inc. Poker Lake Unit CVX JV RB 001H	LTE Advancing Opportunity
March 16, 2019	Photographic Log	