



LT Environmental, Inc.

3300 North "A" Street  
Building 1, Unit 103  
Midland, Texas 79705  
432.704.5178

March 23, 2020

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

**RE: Closure Request  
Poker Lake Unit Big Sinks Federal 25 Battery  
Remediation Permit Numbers 2RP-2526, 2RP-4398, 2RP-4775, 2RP-4779  
Eddy County, New Mexico**

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Poker Lake Unit (PLU) Big Sinks Federal 25 Battery (Site), located in Unit O, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil following four separate events that caused the release of produced water and crude oil at the Site. Based on the excavation activities and results of the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting no further action for the release events.

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

## **RELEASE BACKGROUND**

On October 1, 2014, a buried flow line developed a leak due to external corrosion. Approximately 109 barrels (bbls) of produced water and 10 bbls of crude oil were released onto the surface of the caliche well pad. Approximately 9,656 square feet of well pad was affected by the release. A vacuum truck was used to recover the free-standing fluid; approximately 75 bbls of produced water and 5 bbls of crude oil were recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action



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Form C-141 (Form C-141) on October 7, 2014, and was assigned Remediation Permit (RP) Number 2RP-2526 (Attachment 1).

On September 1, 2017, a corrosion hole developed below ground in the riser of the SWD discharge line. The line was isolated while the riser was exposed and repaired. Approximately 11.12 bbls of produced water were released. Approximately 6,054 square feet of caliche pad and 64 square feet of pasture south of the tank battery was affected by the release. A vacuum truck was used to recover the free-standing fluid; approximately 5 bbls of produced water were recovered from the pasture and southwest corner of the well pad. XTO reported the release to the NMOCD on a Form C-141 on September 18, 2017, and was assigned RP Number 2RP-4398.

On May 13, 2018, the heater-treater and flare scrubber loaded up due to closed valves on the produced water and oil tanks. Fluid was forced out of flare stack which resulted in a small fire. Approximately ¼ bbl of crude oil and 2 bbls of produced water were released. The fire affected a small area of the pad near the flare stack and approximately 60 feet into the pasture north of the flare stack. The fire extinguished itself. XTO reported the release to the NMOCD on a Form C-141 on May 25, 2018, and was assigned RP Number 2RP-4775.

On May 18, 2018, the flare line loaded up and caused fluid out of the flare stack, which resulted in a small fire. Approximately ¼ bbl of crude oil and produced water were released. The fire affected a small section of pad west of the flare. The fire extinguished itself. There was no impact to the pasture. XTO reported the release to the NMOCD on a Form C-141 on May 30, 2018, and was assigned RP Number 2RP-4779.

Although one of the releases occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Since the five releases occurred on the same well pad, excavation and sampling activities were completed to address and close all five releases simultaneously.

## **SITE CHARACTERIZATION**

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320956103503001, located approximately 6,529 feet southwest of the Site. The water well has a depth to groundwater of 446 feet and a total depth of 480 feet. Ground surface elevation at the water well location is 3,408 feet above mean sea level (AMSL), which is approximately 48 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 2,162 feet west-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-potential karst area.

## CLOSURE CRITERIA

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

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

## SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

The four historical releases occurred on the same well pad; therefore, site assessment and soil sampling activities were completed to address and close all releases simultaneously. Due to separate/distinct release areas and duplicative or sequential sample nomenclature the below site assessment and soil sampling summaries and associated figures and tables are separated by RP Number and/or release location on the pad.

### RP Number 2RP-2526

During June 2018, LTE personnel inspected the Site to evaluate the release extent in the central area of the pad, associated with RP Number 2RP-2526. Preliminary soil samples SS7 through SS14 were collected within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet bgs.

During February and April 2019, LTE personnel returned to the Site to oversee site assessment activities. Potholes were advanced via backhoe or trackhoe at 20 locations within and around the release area to confirm the lateral and vertical extent of impacted soil. On February 11, 2019, potholes were advanced to a depth of 4 feet bgs at the SS10 and SS12 preliminary soil sample locations and at additional assessment locations SS23, SS24, SS25, and SS27. Delineation soil samples were collected from each pothole from depths of 2 feet and 4 feet bgs. During April 2019, potholes PH01 through PH13, and PH17 were advanced to depths ranging from 4.5 feet to



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16 feet bgs. Delineation soil samples were collected from each pothole from depths ranging from 0.5 feet to 16 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole delineation soil sample locations are depicted on Figure 2 and Figure 3.

During February and October 2019, LTE personnel was at the Site to oversee excavation of impacted soil as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary and delineation soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth ranging from 1 foot to 7 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW12 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 6 feet bgs. Composite soil samples FS01 through FS09 and FS09A were collected from the floor of the excavation from depths ranging from 1 foot to 7 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 4. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The excavation measured approximately 2,000 square feet in area and was completed to a depth of 1 foot to 7 feet bgs. A total of approximately 275 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

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

#### RP Number 2RP-4398

During June 2018, LTE personnel inspected the Site to evaluate the release extent in the southern area of the pad, associated with RP Number 2RP-4398. Preliminary soil samples SS15 through SS22 were collected within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 5, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from





weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet bgs.

During October 2019, LTE personnel was at the Site to oversee excavation of impacted soil as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth of 5 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavation. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation from depths ranging from 1 foot to 5 feet bgs. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from a depth of 5 feet bgs. The excavation extent remained within the operations area surrounding the SWD riser.

Boreholes and potholes were advanced via hand auger or trackhoe at three locations surrounding the excavation to confirm the extent of soil impacts. Borehole BH01 and potholes PH01 and PH02 were advanced to a depth of 5 feet bgs. Delineation soil samples were collected from each borehole and pothole at 1-foot intervals to a depth of 5 feet bgs. Soil from the borehole and potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each borehole and pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The preliminary soil sample locations, excavation extent and excavation soil sample locations, and delineation soil sample locations are depicted on Figure 5.

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

The excavation measured approximately 340 square feet in area and was completed to a depth of 5 feet bgs. A total of approximately 65 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

#### RP Number 2RP-4775 and 2RP-4779

During June 2018, LTE personnel inspected the Site to evaluate the release extent in the northern area of the pad, associated with RP Numbers 2RP-4775 and 2RP-4997. Preliminary soil samples SS1 through SS6 were collected within and around the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 6, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet bgs.



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During February and April 2019, LTE personnel returned to the Site to oversee site assessment activities. Potholes were advanced via backhoe at 6 locations within and around the release area to confirm the lateral and vertical extent of impacted soil. Potholes were advanced to a depth of 2 feet bgs at the SS1 and SS6 preliminary soil sample locations and at additional assessment locations PH01, PH02, PH14, and PH15. Delineation soil samples were collected from each pothole from depths ranging from 0.5 feet to 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2.

During February 2019, LTE personnel was at the Site to oversee excavation of impacted soil as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth of 2 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. Composite soil sample SW01 was collected from the sidewalls of the excavation from a depth ranging from the ground surface to 2 feet bgs. Composite soil sample FS01 was collected from the floor of the excavation from a depth of 2 feet bgs. The preliminary soil sample locations, excavation extent and excavation soil sample locations, and delineation soil sample locations are depicted on Figure 6.

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

The excavation measured approximately 150 square feet in area and was completed to a depth of 2 feet bgs. A total of approximately 12 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

## ANALYTICAL RESULTS

### RP Numbers 2RP-2526

Laboratory analytical results for preliminary soil samples SS7 through SS14, SS10A/SS10B, SS12A/SS12B, SS23/SS23A through SS25/SS25A, and SS27/SS27A and delineation soil samples collected from potholes PH01 through PH13, and PH17 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on visual observations and field screening activities, impacted soil was excavated from the release area. Laboratory analytical results for excavation soil samples SW01 through SW03, SW05 through SW12, FS01 through FS08, and FS09A, collected from the final excavation extent, indicated that BTEX,

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GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation soil samples SW04 and FS09 indicated that TPH and/or GRO/DRO concentrations initially exceeded the Closure Criteria. Additional soil was removed from these areas and subsequent excavation soil samples SW12 and FS09A were compliant with the Closure Criteria. Based on the laboratory analytical results, no further excavation was required. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

#### RP Number 2RP-4398

Laboratory analytical results for preliminary soil samples SS15 through SS22, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on visual observations, field screening activities, and elevated chloride concentrations, impacted soil was excavated from the release area. Laboratory analytical results for excavation soil samples SW01 through SW04, FS01, and FS02, collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed to confirm the lateral and vertical extent impacted soil. Laboratory analytical results for the delineation soil samples collected from borehole BH01 and potholes PH01 and PH02, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, no further excavation was required. Laboratory analytical results are summarized in Table 2 and the complete laboratory analytical reports are included as Attachment 4.

#### RP Numbers 2RP-4775 and 2RP-4779

Laboratory analytical results for preliminary soil samples SS1/SS1A, SS2, SS4, SS5, SS6A, and delineation soil samples collected from potholes PH01, PH02, PH14, and PH15 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil samples SS3 and SS6 indicated that TPH and/or GRO/DRO concentrations exceeded the Closure Criteria. Based on visual observations and laboratory analytical results for the preliminary soil samples, impacted soil was excavated from the area around preliminary soil samples SS3 and SS6. Laboratory analytical results for excavation soil samples SW01 and FS01 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, no further excavation was required. Laboratory analytical results are summarized in Table 3 and the complete laboratory analytical reports are included as Attachment 4.

#### CLOSURE REQUEST

Site assessment and soil sampling activities were completed within and around the release areas to delineate the lateral and vertical extent of impacted soil resulting from historical releases of crude oil and produced water at the Site. Based on the site assessment activities, impacted soil

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was excavated from three separate release areas. Laboratory analytical results for the excavation soil samples collected from the final excavation extents indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-2526, 2RP-4398, 2RP-4775, and 2RP-4779. XTO backfilled the excavations with material purchased locally and recontoured the Site to match pre-existing site conditions. An updated NMOCD Form C-141 for each release is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole  
Project Environmental Scientist

Ashley L. Ager, P.G.  
Senior Geologist

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

Attachments:

|              |                                                                         |
|--------------|-------------------------------------------------------------------------|
| Figure 1     | Site Location Map                                                       |
| Figure 2     | Preliminary Soil Sample Locations (2RP-2526)                            |
| Figure 3     | Delineation Soil Sample Locations (2RP-2526)                            |
| Figure 4     | Excavation Soil Sample Locations (2RP-2526)                             |
| Figure 5     | Soil Sample Locations (2RP-4398)                                        |
| Figure 6     | Soil Sample Locations (2RP-4775 and 2RP-4779)                           |
| Table 1      | Soil Analytical Results (2RP-2526)                                      |
| Table 2      | Soil Analytical Results (2RP-4398)                                      |
| Table 3      | Soil Analytical Results (2RP-4775 and 2RP-4779)                         |
| Attachment 1 | Initial/Final NMOCD Form C-141 (2RP-2526, 2RP-4398, 2RP-4775, 2RP-4779) |



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Attachment 2 Lithologic/Soil Sample Logs  
Attachment 3 Photographic Log  
Attachment 4 Laboratory Analytical Reports

FIGURES





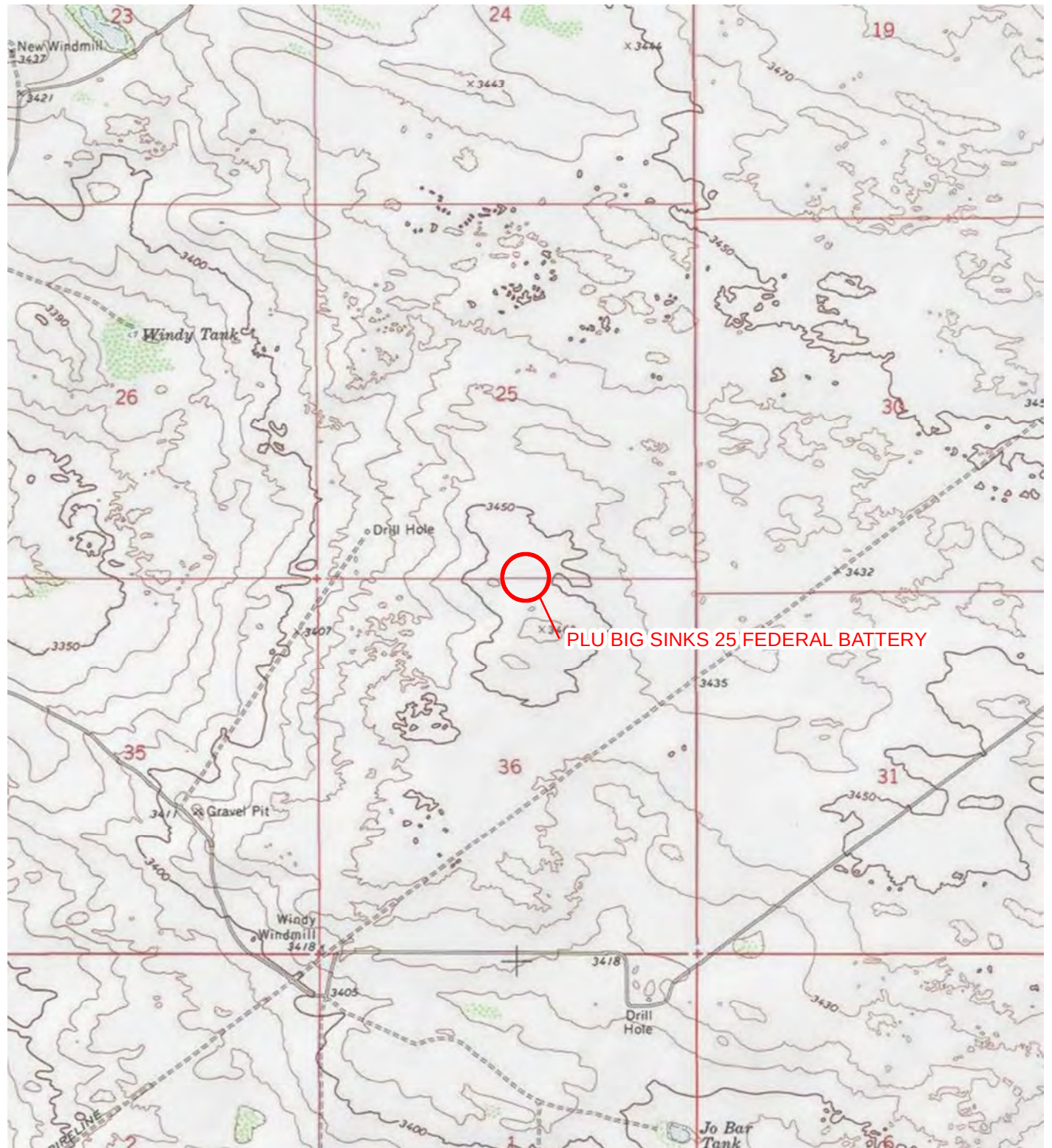


IMAGE COURTESY OF ESRI/USGS

**LEGEND**

 SITE LOCATION

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Feet



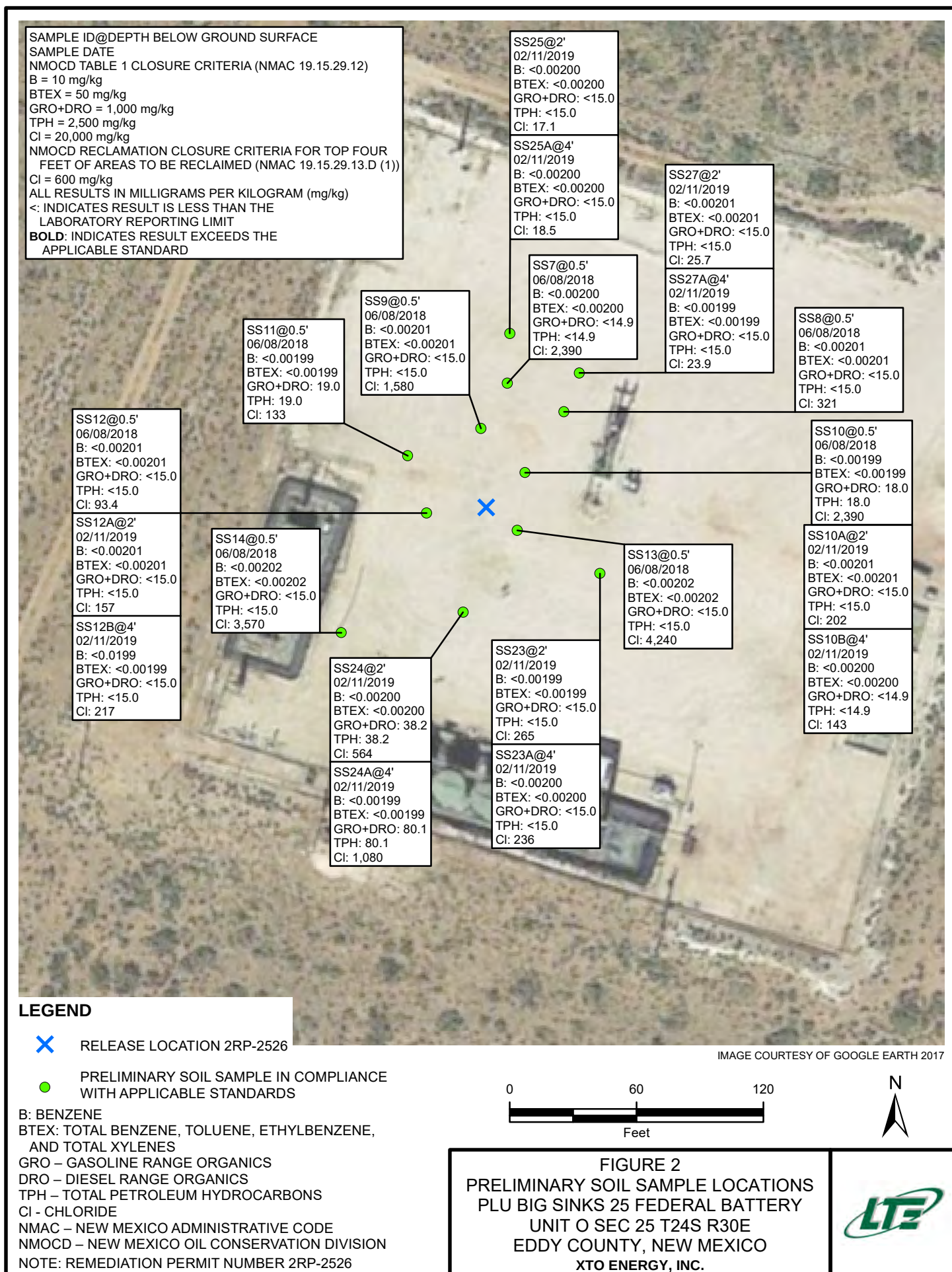
NOTE: REMEDIATION PERMIT  
NUMBERS 2RP-2526, 2RP-4327,  
2RP-4398, & 2RP-4779

**FIGURE 1**  
**SITE LOCATION MAP**  
**PLU BIG SINKS 25 FEDERAL BATTERY**  
**UNIT O SEC 25 T24S R30E**  
**EDDY COUNTY, NEW MEXICO**  
**XTO ENERGY, INC.**



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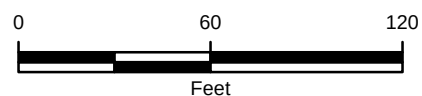




**LEGEND**

-  RELEASE LOCATION 2RP-2526  
 DELINEATION SOIL SAMPLE

IMAGE COURTESY OF GOOGLE EARTH 2017



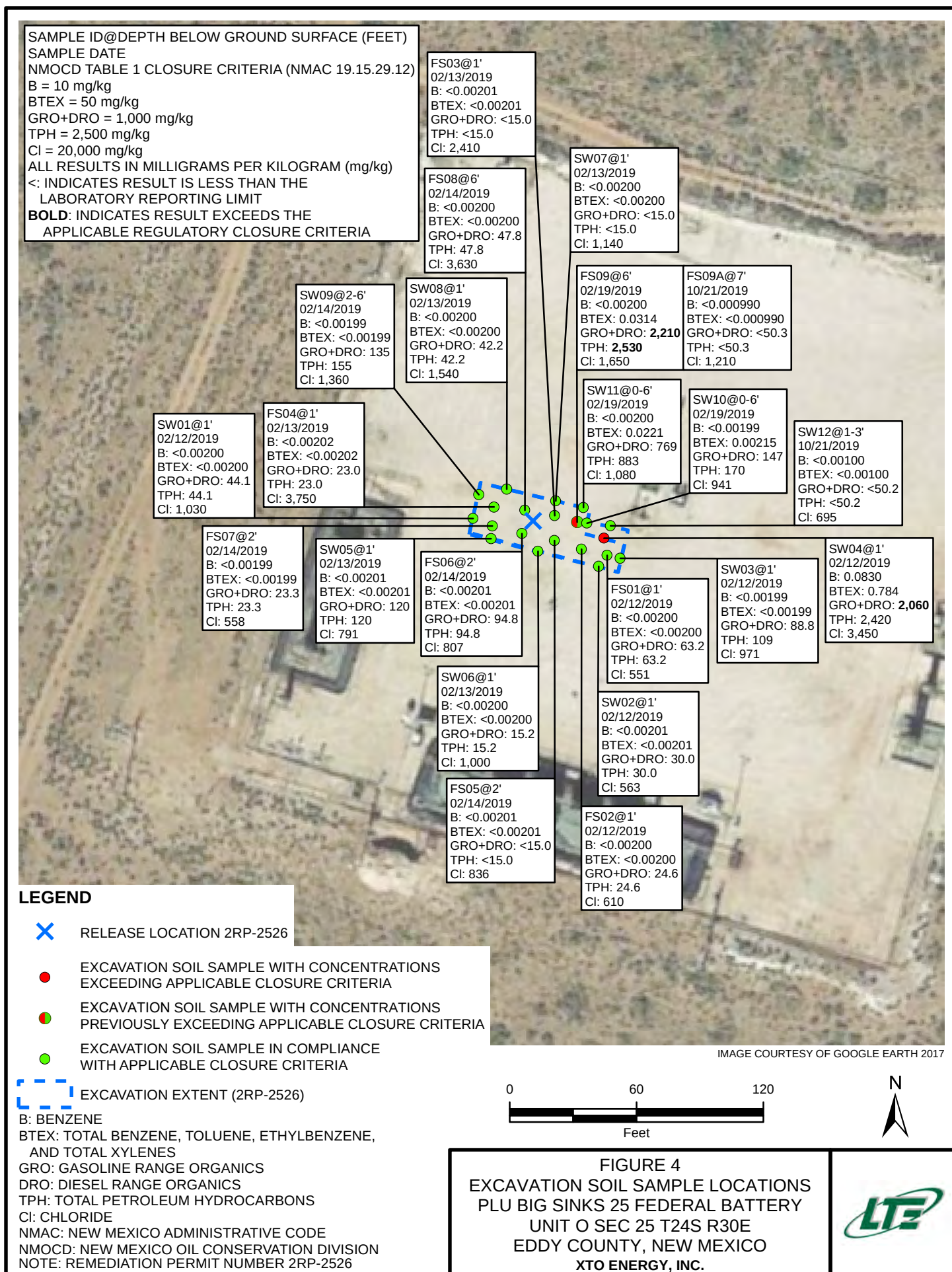
**FIGURE 3**  
 DELINEATION SOIL SAMPLE LOCATIONS  
 PLU BIG SINKS 25 FEDERAL BATTERY  
 UNIT O SEC 25 T24S R30E  
 EDDY COUNTY, NEW MEXICO  
**XTO ENERGY, INC.**

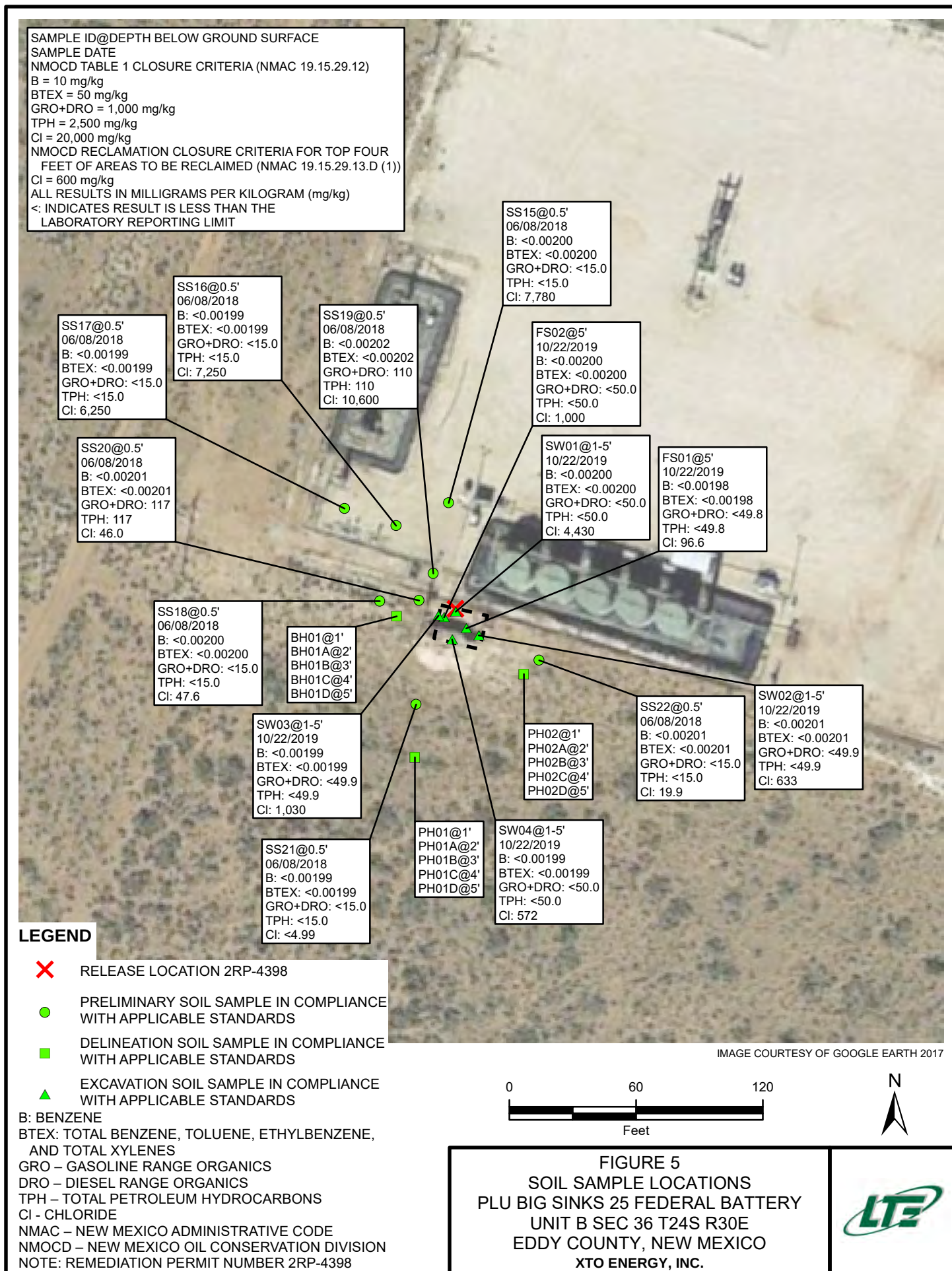


NOTE: REMEDIATION PERMIT NUMBER 2RP-2526

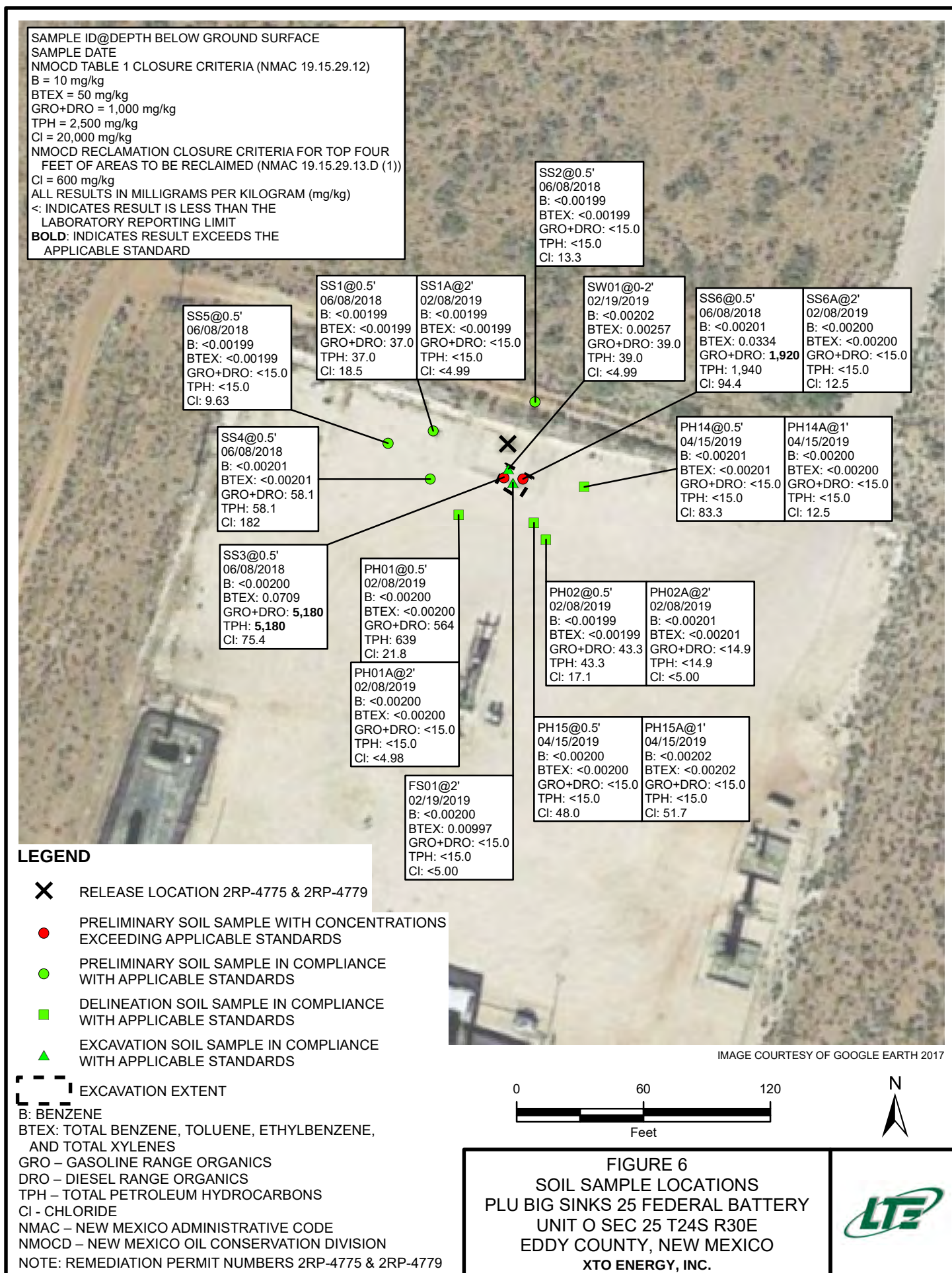
P:\XTO Energy\GIS\MXD\012918093\_PLU CVX JV #005H\_AKA BS25\012918093\_FIG03\_DELINEATION SS\_2018\_2526.mxd











TABLES



**TABLE 1  
SOIL ANALYTICAL RESULTS**

**PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDATION PERMIT NUMBER 2RP-2526  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Report Number | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|---------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| SS7                                   | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9        | 2,390            |
| SS8                                   | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 321              |
| SS9                                   | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 1,580            |
| SS10                                  | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 18.0        | <15.0       | 18.0                  | 18.0         | 2,390            |
| SS10A                                 | 2                       | 2RP-2526      | 2/11/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 202              |
| SS10B                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9        | 143              |
| SS11                                  | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 19.0        | <15.0       | 19.0                  | 19.0         | 133              |
| SS12                                  | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 93.4             |
| SS12A                                 | 2                       | 2RP-2526      | 2/11/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 157              |
| SS12B                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 217              |
| SS13                                  | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 4,240            |
| SS14                                  | 0.5                     | 2RP-2526      | 6/8/2018    | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 3,570            |
| SS23                                  | 2                       | 2RP-2526      | 2/11/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 265              |
| SS23A                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 236              |
| SS24                                  | 2                       | 2RP-2526      | 2/11/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <14.9       | 38.2        | <14.9       | 38.2                  | 38.2         | 564              |
| SS24A                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 80.1        | <15.0       | 80.1                  | 80.1         | 1,080            |
| SS25                                  | 2                       | 2RP-2526      | 2/11/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 17.1             |
| SS25A                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 18.5             |
| SS27                                  | 2                       | 2RP-2526      | 2/11/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 25.7             |
| SS27A                                 | 4                       | 2RP-2526      | 2/11/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 23.9             |
| PH01                                  | 13                      | 2RP-2526      | 4/2/2019    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <15.0            |
| PH02                                  | 16                      | 2RP-2526      | 4/2/2019    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <15.0            |
| PH03                                  | 8                       | 2RP-2526      | 4/2/2019    | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <15.0            |
| PH04                                  | 12                      | 2RP-2526      | 4/3/2019    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9        | <14.9            |
| PH05                                  | 3.5                     | 2RP-2526      | 04/17/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 188              |
| PH05A                                 | 6.5                     | 2RP-2526      | 04/17/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 191              |
| PH06                                  | 0.5                     | 2RP-2526      | 04/17/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 1140             |
| PH06A                                 | 2.5                     | 2RP-2526      | 04/17/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 308              |
| PH06B                                 | 6.5                     | 2RP-2526      | 04/17/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9        | 62.6             |
| <b>NMOCD Table 1 Closure Criteria</b> |                         |               |             | <b>10</b>       | <b>NE</b>       | <b>NE</b>             | <b>NE</b>             | <b>50</b>          | <b>NE</b>   | <b>NE</b>   | <b>NE</b>   | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |



TABLE 1  
SOIL ANALYTICAL RESULTS

PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDATION PERMIT NUMBER 2RP-2526  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.

| Sample Name                    | Sample Depth (feet bgs) | Report Number | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg) | Chloride (mg/kg) |
|--------------------------------|-------------------------|---------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|-------------|------------------|
| PH07                           | 3                       | 2RP-2526      | 04/17/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 226              |
| PH07A                          | 4.5                     | 2RP-2526      | 04/17/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 228              |
| PH08                           | 6                       | 2RP-2526      | 04/17/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 300              |
| PH08A                          | 11                      | 2RP-2526      | 04/17/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 101              |
| PH09                           | 4.5                     | 2RP-2526      | 4/12/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | <15.0            |
| PH09A                          | 7.5                     | 2RP-2526      | 4/12/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | <15.0            |
| PH10                           | 8.5                     | 2RP-2526      | 4/12/2019   | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | <15.0            |
| PH10A                          | 12.5                    | 2RP-2526      | 4/12/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | <15.0            |
| PH11                           | 4.5                     | 2RP-2526      | 04/15/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 471              |
| PH11A                          | 11                      | 2RP-2526      | 04/15/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9       | 203              |
| PH12                           | 0.5                     | 2RP-2526      | 04/15/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9       | 235              |
| PH12A                          | 4.5                     | 2RP-2526      | 04/15/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 868              |
| PH13                           | 6.5                     | 2RP-2526      | 04/15/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 42.0             |
| PH13A                          | 10.5                    | 2RP-2526      | 04/15/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 118              |
| PH17                           | 3                       | 2RP-2526      | 04/17/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 157              |
| PH17A                          | 6.5                     | 2RP-2526      | 04/17/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 111              |
| SW01                           | 1                       | 2RP-2526      | 2/12/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 44.1        | <15.0       | 44.1                  | 44.1        | 1,030            |
| SW02                           | 1                       | 2RP-2526      | 2/12/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | 30.0        | <15.0       | 30.0                  | 30.0        | 563              |
| SW03                           | 1                       | 2RP-2526      | 2/12/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 88.8        | 20.4        | 109.2                 | 109         | 971              |
| SW04                           | 1                       | 2RP-2526      | 2/12/2019   | 0.0830          | 0.159           | 0.0526                | 0.489                 | 0.784              | 214         | 1,850       | 360         | 2,210                 | 2420        | 3,450            |
| SW05                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | 120         | <15.0       | 120                   | 120         | 791              |
| SW06                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 15.2        | <15.0       | 15.2                  | 15.2        | 1,000            |
| SW07                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0       | 1,140            |
| SW08                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 42.2        | <15.0       | 42.2                  | 42.2        | 1,540            |
| SW09                           | 2 - 6                   | 2RP-2526      | 2/14/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 135         | 19.8        | 154.8                 | 155         | 1,360            |
| SW10                           | 0 - 6                   | 2RP-2526      | 2/19/2019   | <0.00199        | 0.00215         | <0.00199              | <0.00199              | 0.00215            | <15.0       | 147         | 23.1        | 170                   | 170         | 941              |
| SW11                           | 0 - 6                   | 2RP-2526      | 2/19/2019   | <0.00200        | <0.00200        | <0.00200              | 0.0221                | 0.0221             | 54.1        | 715         | 114         | 829                   | 883         | 1,080            |
| SW12                           | 1 - 3                   | 2RP-2526      | 10/21/2019  | <0.00100        | <0.00100        | <0.00100              | <0.00100              | <0.00100           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2       | 695              |
| NMOCD Table 1 Closure Criteria |                         |               |             | 10              | NE              | NE                    | NE                    | 50                 | NE          | NE          | NE          | 1,000                 | 2,500       | 20,000           |

TABLE 1  
SOIL ANALYTICAL RESULTS

PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDATION PERMIT NUMBER 2RP-2526  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.

| Sample Name                    | Sample Depth (feet bgs) | Report Number | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|--------------------------------|-------------------------|---------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| FS01                           | 1                       | 2RP-2526      | 2/12/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 63.2        | <15.0       | 63.2                  | 63.2         | 551              |
| FS02                           | 1                       | 2RP-2526      | 2/12/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <14.9       | 24.6        | <14.9       | 24.6                  | 24.6         | 610              |
| FS03                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 2,410            |
| FS04                           | 1                       | 2RP-2526      | 2/13/2019   | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | 23.0        | <15.0       | 23.0                  | 23.0         | 3,750            |
| FS05                           | 2                       | 2RP-2526      | 2/14/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 836              |
| FS06                           | 2                       | 2RP-2526      | 2/14/2019   | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | 94.8        | <15.0       | 94.8                  | 94.8         | 807              |
| FS07                           | 2                       | 2RP-2526      | 2/14/2019   | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 23.3        | <15.0       | 23.3                  | 23.3         | 558              |
| FS08                           | 6                       | 2RP-2526      | 2/14/2019   | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 47.8        | <15.0       | 47.8                  | 47.8         | 3,630            |
| FS09                           | 6                       | 2RP-2526      | 2/19/2019   | <0.00200        | 0.00218         | 0.00269               | 0.0265                | 0.0314             | 156         | 2,050       | 324         | <b>2,374</b>          | <b>2,530</b> | 1,650            |
| FS09A                          | 7                       | 2RP-2526      | 10/21/2019  | <0.000990       | <0.000990       | <0.000990             | <0.000990             | <0.000990          | <50.3       | <50.3       | <50.3       | <50.3                 | <50.3        | 1,210            |
| NMOCD Table 1 Closure Criteria |                         |               |             | 10              | NE              | NE                    | NE                    | 50                 | NE          | NE          | NE          | 1,000                 | 2,500        | 20,000           |

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 20

**TABLE 2  
SOIL ANALYTICAL RESULTS**

**PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDATION PERMIT NUMBER 2RP-4398  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Report Number | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|---------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| SS15                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 7,780            |
| SS16                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 7,250            |
| SS17                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 6,250            |
| SS18                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 47.6             |
| SS19                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <14.9       | 110         | <14.9       | 110                   | 110          | 10,600           |
| SS20                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | 117         | <14.9       | 117                   | 117          | 46.0             |
| SS21                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <4.99            |
| SS22                                  | 0.5                     | 2RP-4398      | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 19.9             |
| BH01                                  | 1                       | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | <5.05            |
| BH01A                                 | 2                       | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | <5.00            |
| BH01B                                 | 3                       | 2RP-4398      | 10/22/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 62.3             |
| BH01C                                 | 4                       | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 40.3             |
| BH01D                                 | 5                       | 2RP-4398      | 10/22/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 18.1             |
| PH01                                  | 1                       | 2RP-4398      | 10/22/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | <4.97            |
| PH01A                                 | 2                       | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | <4.97            |
| PH01B                                 | 3                       | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | <5.01            |
| PH01C                                 | 4                       | 2RP-4398      | 10/22/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 8.30             |
| PH01D                                 | 5                       | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 7.72             |
| PH02                                  | 1                       | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | <4.99            |
| PH02A                                 | 2                       | 2RP-4398      | 10/22/2019  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 5.08             |
| PH02B                                 | 3                       | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | <5.04            |
| PH02C                                 | 4                       | 2RP-4398      | 10/22/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 23.4             |
| PH02D                                 | 5                       | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 29.4             |
| <b>NMOCD Table 1 Closure Criteria</b> |                         |               |             | <b>10</b>       | <b>NE</b>       | <b>NE</b>             | <b>NE</b>             | <b>50</b>          | <b>NE</b>   | <b>NE</b>   | <b>NE</b>   | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |

TABLE 2  
SOIL ANALYTICAL RESULTS

PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDATION PERMIT NUMBER 2RP-4398  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.

| Sample Name                    | Sample Depth (feet bgs) | Report Number | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg) | Chloride (mg/kg) |
|--------------------------------|-------------------------|---------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|-------------|------------------|
| SW01                           | 1 - 5                   | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0       | 4,430            |
| SW02                           | 1 - 5                   | 2RP-4398      | 10/22/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9       | 633              |
| SW03                           | 1 - 5                   | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9       | 1,030            |
| SW04                           | 1 - 5                   | 2RP-4398      | 10/22/2019  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0       | 572              |
| FS01                           | 5                       | 2RP-4398      | 10/22/2019  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8       | 96.6             |
| FS02                           | 5                       | 2RP-4398      | 10/22/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0       | 1,000            |
| NMOCD Table 1 Closure Criteria |                         |               |             | 10              | NE              | NE                    | NE                    | 50                 | NE          | NE          | NE          | 1,000                 | 2,500       | 20,000           |

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 20



TABLE 3  
SOIL ANALYTICAL RESULTS  
PLU BIG SINKS 25 FEDERAL BATTERY  
REMEDIATION PERMIT NUMBER 2RP-4775 and 2RP-4779  
EDDY COUNTY, NEW MEXICO  
XTO ENERGY, INC.

| Sample Name                    | Sample Depth (feet bgs) | Report Number      | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|--------------------------------|-------------------------|--------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| SS1                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 37.0        | <15.0       | 37.0                  | 37.0         | 18.5             |
| SS1A                           | 2                       | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <4.99            |
| SS2                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 13.3             |
| SS3                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00200        | 0.00306         | 0.00618               | 0.0617                | 0.0709             | 204         | 4,980       | <15.0       | <b>4,980</b>          | <b>5,180</b> | 75.4             |
| SS4                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | 58.1        | <14.9       | 58.1                  | 58.1         | 182              |
| SS5                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 9.63             |
| SS6                            | 0.5                     | 2RP-4775, 2RP-4779 | 6/8/2018    | <0.00201        | <0.00201        | 0.00287               | 0.0305                | 0.0334             | 50.4        | 1,870       | 21.2        | <b>1,891</b>          | 1,940        | 94.4             |
| SS6A                           | 2                       | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 12.5             |
| PH01                           | 0.5                     | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | 564         | 75.4        | 564                   | 639          | 21.8             |
| PH01A                          | 2                       | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <4.98            |
| PH02                           | 0.5                     | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <15.0       | 43.3        | <15.0       | 43.3                  | 43.3         | 17.1             |
| PH02A                          | 2                       | 2RP-4775, 2RP-4779 | 2/8/2019    | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <14.9       | <14.9       | <14.9       | <14.9                 | <14.9        | <5.00            |
| PH14                           | 0.5                     | 2RP-4775, 2RP-4779 | 04/15/2019  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 83.3             |
| PH14A                          | 1                       | 2RP-4775, 2RP-4779 | 04/15/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 12.5             |
| PH15                           | 0.5                     | 2RP-4775, 2RP-4779 | 04/15/2019  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 48.0             |
| PH15A                          | 1                       | 2RP-4775, 2RP-4779 | 04/15/2019  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | 51.7             |
| SW01                           | 0 - 2                   | 2RP-4775, 2RP-4779 | 2/19/2019   | <0.00202        | 0.00257         | <0.00202              | <0.00202              | 0.00257            | <15.0       | 39.0        | <15.0       | 39.0                  | 39.0         | <4.99            |
| FS01                           | 2                       | 2RP-4775, 2RP-4779 | 2/19/2019   | <0.00200        | <0.00200        | 0.00261               | 0.00736               | 0.00997            | <15.0       | <15.0       | <15.0       | <15.0                 | <15.0        | <5.00            |
| NMOCD Table 1 Closure Criteria |                         |                    |             | 10              | NE              | NE                    | NE                    | 50                 | NE          | NE          | NE          | 1,000                 | 2,500        | 20,000           |

**Notes:**

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

&lt; - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2019

ATTACHMENT 1: INITIAL/FINAL NMOC FORM C-141 (2RP-2526, 2RP-4398, 2RP-4775, 2RP-4779)

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

OCT 08 2014  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

RECEIVED

## Release Notification and Corrective Action

NAB1428137122 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 2100737 Contact: Tony Savoie  
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 575-887-7329  
Facility Name: PLU-CVX-JV #005H (AKA Big Sinks 25 Federal #1H) Facility Type: Exploration and Production

Surface Owner: Federal Mineral Owner: Federal API No. 30-015-39018

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| O           | 25      | 24S      | 30E   | 100           | South            | 2240          | East           | Eddy   |

Latitude N 32.18193 Longitude W 103.83318

## NATURE OF RELEASE

|                                                                                                                                          |                                                                      |                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------|
| Type of Release: Crude oil and produced water                                                                                            | Volume of Release: 10 bbls of crude oil and 109 bbls produced water. | Volume Recovered: 5 bbls crude oil and 75 bbls produced water.  |
| Source of Release: 2 7/8" flow line                                                                                                      | Date and Hour of Occurrence: 10/1/14 time unknown                    | Date and Hour of Discovery: 10/1/14 at approximately 10:00 a.m. |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>NMOCD emergency #104                             |                                                                 |
| By Whom? Bradley Blevins                                                                                                                 | Date and Hour: 10/1/14 at approximately 4:30 p.m.                    |                                                                 |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                        | If YES, Volume Impacting the Watercourse.                            |                                                                 |

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

The buried flow line developed a leak due to external corrosion. A repair clamp was placed on the leak area. Crews replaced the flow line across the well pad with externally coated pipe on 10/2/14.

Describe Area Affected and Cleanup Action Taken.\*

The release impacted approximately 9,656 sq.ft. of caliche well pad area. All of the free standing fluid was removed with a vacuum truck. The stained area on the pad was left as is pending remediation activities.

The spill area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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

|                                                    |                                                                                                           |                                   |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------|
| Signature: <u>Tony Savoie</u>                      | OIL CONSERVATION DIVISION                                                                                 |                                   |
| Printed Name: Tony Savoie                          | Signed By <u>M. L. Brannon</u><br>Approved by Environmental Specialist:                                   |                                   |
| Title: Waste Management and Remediation Specialist | Approval Date: <u>10/18/14</u>                                                                            | Expiration Date: <u>N/A</u>       |
| E-mail Address: tasavoie@basspet.com               | Conditions of Approval:                                                                                   |                                   |
| Date: <u>10/17/14</u> Phone: 432-556-8730          | Remediation per O.C.D. Rules & Guidelines<br>SUBMIT REMEDIATION PROPOSAL NO<br>LATER THAN: <u>11/5/14</u> |                                   |
|                                                    |                                                                                                           | Attached <input type="checkbox"/> |

\* Attach Additional Sheets If Necessary

2RP-2526

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-2526 |
| Facility ID    |          |
| Application ID |          |

## Release Notification

### Responsible Party

|                                                                      |                                   |
|----------------------------------------------------------------------|-----------------------------------|
| Responsible Party: XTO Energy, Inc                                   | OGRID: 5380                       |
| Contact Name: Kyle Littrell                                          | Contact Telephone: (432)-221-7331 |
| Contact email: Kyle_Littrell@xtoenergy.com                           | Incident #: 2RP-2526              |
| Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220 |                                   |

### Location of Release Source

Latitude N 32.18193 Longitude W 103.83318  
(NAD 83 in decimal degrees to 5 decimal places)

|                                                            |                                     |
|------------------------------------------------------------|-------------------------------------|
| Site Name: PLU-CVX-JV #005H (AKA Big Sinks 25 Federal #1H) | Site Type: Production Well Facility |
| Date Release Discovered: 10/1/2014                         | API# (if applicable): 30-015-39018  |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| O           | 25      | 24S      | 30E   | 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)

|                                                    |                                                                                |                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> Crude Oil      | Volume Released (bbls):10                                                      | Volume Recovered (bbls):5                                |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls): 109                                                    | Volume Recovered (bbls): 75                              |
|                                                    | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)                                                          | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units)                  |

#### Cause of Release

The buried flow line developed a leak due to external corrosion.



|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-2526 |
| Facility ID    |          |
| Application ID |          |

|                                                                                                                                                                      |                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                | If YES, for what reason(s) does the responsible party consider this a major release?<br>Volume released was greater than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>By Bradley Blevins to NMOCD on 10/1/2014 at 4:30 pm. |                                                                                                                                   |

## Initial Response

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.                                                                                                                                                                                                                                                                                               |                                   |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |                                   |
| Printed Name: <u>Kyle Littrell</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Title: <u>SH&amp;E Supervisor</u> |
| Signature: <u></u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Date: <u>3/20/2020</u>            |
| email: <u>Kyle_Littrell@xtoenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Telephone: <u>432-221-7331</u>    |
| <b><u>OCD Only</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                   |
| Received by: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date: _____                       |

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-2526 |
| 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?                                                                                                           | <u>&gt;100</u> (ft bgs)                                             |
| Did this release impact groundwater or surface water?                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?                                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

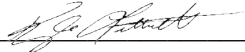
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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

Page 4

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-2526 |
| 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 SupervisorSignature:  Date: 3/20/2020email: Kyle\_Littrell@xtoenergy.com Telephone: (432)-221-7331**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

|                |               |
|----------------|---------------|
| Incident ID    | nAB1428137122 |
| District RP    | 2RP-2526      |
| Facility ID    |               |
| Application ID |               |

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 3/20/2020

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: Bradford Billings Date: 10/25/2022

Printed Name: Bradford Billings Title: E.Spec.A



## NM OIL CONSERVATION

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

ARTESIA DISTRICT

SEP 18 2017

Form C-141  
Revised August 8, 2011

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

RECEIVED

## Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

*NAB 1726334570*

|                                                                                    |                                           |
|------------------------------------------------------------------------------------|-------------------------------------------|
| Name of Company: XTO Energy / <i>BOPCO 360737</i>                                  | Contact: Amy Ruth                         |
| Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220                             | Telephone No. 575-887-7329                |
| Facility Name: PLU Big Sinks 25 Federal Battery (API for well PLU CVX JV BS #005H) | Facility Type: Exploration and Production |

|                        |                        |                      |
|------------------------|------------------------|----------------------|
| Surface Owner: Federal | Mineral Owner: Federal | API No. 30-015-39018 |
|------------------------|------------------------|----------------------|

## LOCATION OF RELEASE

|                  |               |                 |              |                     |                           |                       |                        |                |
|------------------|---------------|-----------------|--------------|---------------------|---------------------------|-----------------------|------------------------|----------------|
| Unit Letter<br>B | Section<br>36 | Township<br>24S | Range<br>30E | Feet from the<br>50 | North/South Line<br>North | Feet from the<br>2340 | East/West Line<br>East | County<br>Eddy |
|------------------|---------------|-----------------|--------------|---------------------|---------------------------|-----------------------|------------------------|----------------|

Latitude 32.181458° Longitude -103.833299°

## NATURE OF RELEASE

|                                                                                                                                          |                                                      |                                             |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------|
| Type of Release<br>Produced Water                                                                                                        | Volume of Release<br>11.12 BPW                       | Volume Recovered<br>5 BPW                   |
| Source of Release<br>SWD discharge steel riser                                                                                           | Date and Hour of Occurrence<br>9/1/2017 time unknown | Date and Hour of Discovery<br>9/1/2017 8 am |
| Was Immediate Notice Given?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required | If YES, To Whom?<br>N/A                              |                                             |
| By Whom?<br>N/A                                                                                                                          | Date and Hour<br>N/A                                 |                                             |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                        | If YES, Volume Impacting the Watercourse.<br>N/A     |                                             |

If a Watercourse was Impacted, Describe Fully.\*  
N/A

Describe Cause of Problem and Remedial Action Taken.\*

A hole developed below the ground surface in the riser of the SWD discharge line due to internal corrosion. The line was isolated while the riser was exposed for repairs.

Describe Area Affected and Cleanup Action Taken.\*

The leak affected approximately 6,054 square feet of caliche pad and about 64 square feet of pasture to the south of the tank battery impermeable containment. Free standing fluids were recovered from the pasture and southwest corner of the facility pad.

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

## OIL CONSERVATION DIVISION

|                                        |                                                            |                      |
|----------------------------------------|------------------------------------------------------------|----------------------|
| Signature: <i>Amy C. Ruth</i>          | Approved by Environmental Specialist: <i>Cynthia P. We</i> |                      |
| Printed Name: Amy C. Ruth              | Approval Date: 9/19/17                                     | Expiration Date: N/A |
| Title: Environmental Coordinator       | Conditions of Approval: <i>see attached</i>                |                      |
| E-mail Address: Amy_Ruth@xtoenergy.com | Attached: <i>ARP-4398</i>                                  |                      |
| Date: 9/18/2017 Phone: 432-661-0571    |                                                            |                      |

\* Attach Additional Sheets If Necessary

Please refer to the New Mexico Oil  
Conservation Division Website for  
updated form(s) at:  
[http://www.emnrd.state.nm.us/  
OCD/forms.html](http://www.emnrd.state.nm.us/OCD/forms.html) Thank you

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4398 |
| Facility ID    |          |
| Application ID |          |

## Release Notification

### Responsible Party

|                                                                     |                                   |
|---------------------------------------------------------------------|-----------------------------------|
| Responsible Party: XTO Energy, Inc                                  | OGRID: 5380                       |
| Contact Name: Kyle Littrell                                         | Contact Telephone: (432)-221-7331 |
| Contact email: Kyle_Littrell@xtoenergy.com                          | Incident #: 2RP-4398              |
| Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220 |                                   |

### Location of Release Source

Latitude N 32.181458 Longitude W 103.833299  
(NAD 83 in decimal degrees to 5 decimal places)

|                                             |                                     |
|---------------------------------------------|-------------------------------------|
| Site Name: PLU Big Sinks 25 Federal Battery | Site Type: Production Well Facility |
| Date Release Discovered: 9/1/2017           | API# (if applicable): 30-015-39018  |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| O           | 25      | 24S      | 30E   | 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)

|                                                    |                                                                                |                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Crude Oil                 | Volume Released (bbls):                                                        | Volume Recovered (bbls):                                 |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls): 11.12                                                  | Volume Recovered (bbls): 5                               |
|                                                    | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)                                                          | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units)                  |

#### Cause of Release

A hole developed in the riser of the SWD discharge line due to internal corrosion.

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4398 |
| Facility ID    |          |
| Application ID |          |

|                                                                                                                                       |                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release?<br>Release volume was less than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>N/A                   |                                                                                                                               |

### Initial Response

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.                                                                                                                                                                                                                                                                                               |                                   |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |                                   |
| Printed Name: <u>Kyle Littrell</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Title: <u>SH&amp;E Supervisor</u> |
| Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: <u>3-20-2020</u>            |
| email: <u>Kyle_Littrell@xtoenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Telephone: <u>432-221-7331</u>    |
| <b><u>OCD Only</u></b><br><br>Received by: _____ Date: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                   |

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4398 |
| 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?                                                                                                           | <u>&gt;100</u> (ft bgs)                                             |
| Did this release impact groundwater or surface water?                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?                                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

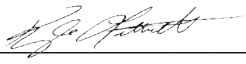
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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

Page 4

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4398 |
| 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: 3-20-2020  
email: Kyle\_Littrell@xtoenergy.com Telephone: (432)-221-7331

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_



|                |               |
|----------------|---------------|
| Incident ID    | nAB1726334570 |
| District RP    | 2RP-4398      |
| Facility ID    |               |
| Application ID |               |

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 3-20-2020

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: Bradford Billings Date: 10/25/2022

Printed Name: Bradford Billings Title: E.Spec.A

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

MAY 25 2018

Form C-141  
Revised April 3, 2017

Oil Conservation Division DISTRICT IV ARTESIA, N.M.  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
Appropriate District Office in accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

*NAB181574901A* OPERATOR ☒ Initial Report ☐ Final Report

|                                                                                         |                                           |
|-----------------------------------------------------------------------------------------|-------------------------------------------|
| Name of Company: XTO Energy <i>BRD 2140737</i>                                          | Contact: Kyle Littrell                    |
| Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220                                  | Telephone No: 432-221-7331                |
| Facility Name: PLU Big Sinks 25 Federal Battery (API - Poker Lake Unit CVX JV BS #005H) | Facility Type: Exploration and Production |

|                        |                        |                      |
|------------------------|------------------------|----------------------|
| Surface Owner: Federal | Mineral Owner: Federal | API No: 30-015-39018 |
|------------------------|------------------------|----------------------|

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| O           | 25      | 24S      | 30E   | 32            | South            | 2400          | East           | Eddy   |

Latitude 32.181688 Longitude -103.832976 NAD83

## NATURE OF RELEASE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                   |                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Type of Release<br>Oil and produced water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Volume of Release<br><1/4 BBL oil, 2 BBL produced water                                                                           | Volume Recovered<br>0 bbl                       |
| Source of Release<br>Flare                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date and Hour of Occurrence<br>5/13/2018, AM                                                                                      | Date and Hour of Discovery<br>5/13/18, 12:00 PM |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | If YES, To Whom?<br>Mike Bratcher and Crystal Weaver (NMOCD), Jim Amos and Shelly Tucker (BLM), Mark Naranjo and Ryan Mann, (SLO) |                                                 |
| By Whom? Kyle Littrell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Date and Hour: 5/14/2018, 7:09 AM                                                                                                 |                                                 |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | If YES, Volume Impacting the Watercourse.<br>N/A                                                                                  |                                                 |
| If a Watercourse was Impacted, Describe Fully.*<br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                 |
| Describe Cause of Problem and Remedial Action Taken.*<br>Heater treater and flare scrubber loaded up and caused fluid to exit the flare stack, resulting in a small fire. The fire extinguished itself. Lease operator discovered that valves had been closed on water and oil tanks. Valves were corrected and facility was shut in until repairs could be made.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |                                                 |
| Describe Area Affected and Cleanup Action Taken.*<br>The fire affected a small area of the pad near the flare stack and sixty feet north into the pasture. An environmental contractor has been retained to assist with remediation efforts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                   |                                                 |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |                                                                                                                                   |                                                 |

|                                             |                                                          |                             |
|---------------------------------------------|----------------------------------------------------------|-----------------------------|
| Signature: <i>[Signature]</i>               | OIL CONSERVATION DIVISION                                |                             |
| Printed Name: Kyle Littrell                 | Approved by Environmental Specialist: <i>[Signature]</i> |                             |
| Title: Environmental Coordinator            | Approval Date: <i>6/5/18</i>                             | Expiration Date: <i>NIA</i> |
| E-mail Address: Kyle.Littrell@xtoenergy.com | Conditions of Approval: <i>See attached</i>              | Attached <i>RP 4775</i>     |
| Date: 5/25/2018 Phone: 432-221-7331         |                                                          |                             |

\* Attach Additional Sheets If Necessary

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4775 |
| Facility ID    |          |
| Application ID |          |

## Release Notification

### Responsible Party

|                                                                     |                                   |
|---------------------------------------------------------------------|-----------------------------------|
| Responsible Party: XTO Energy, Inc                                  | OGRID: 5380                       |
| Contact Name: Kyle Littrell                                         | Contact Telephone: (432)-221-7331 |
| Contact email: Kyle_Littrell@xtoenergy.com                          | Incident #: 2RP-4775              |
| Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220 |                                   |

### Location of Release Source

Latitude N 32.181688 Longitude W 103.832976  
(NAD 83 in decimal degrees to 5 decimal places)

|                                             |                                     |
|---------------------------------------------|-------------------------------------|
| Site Name: PLU Big Sinks 25 Federal Battery | Site Type: Production Well Facility |
| Date Release Discovered: 5/13/2018          | API# (if applicable): 30-015-39018  |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| O           | 25      | 24S      | 30E   | 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)

|                                                    |                                                                                |                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> Crude Oil      | Volume Released (bbls): 1/4                                                    | Volume Recovered (bbls): 0                               |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls): 2                                                      | Volume Recovered (bbls): 0                               |
|                                                    | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)                                                          | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units)                  |

#### Cause of Release

The heater-treater and flare scrubber loaded up and caused fluid to exit the flare stack, resulting in a small fire.

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4775 |
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|                                                                                                                                       |                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release?<br>Release volume less than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>N/A                   |                                                                                                                           |

### Initial Response

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.                                                                                                                                                                                                                                                                                               |                                   |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |                                   |
| Printed Name: <u>Kyle Littrell</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Title: <u>SH&amp;E Supervisor</u> |
| Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: <u>3-20-2020</u>            |
| email: <u>Kyle.Littrell@xtoenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Telephone: <u>432-221-7331</u>    |
| <b><u>OCD Only</u></b><br>Received by: _____ Date: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                   |

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4775 |
| 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?                                                                                                           | <u>&gt;100</u> (ft bgs)                                             |
| Did this release impact groundwater or surface water?                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?                                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?                                                                                            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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

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|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4775 |
| 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: 3-20-2020

email: Kyle\_Littrell@xtoenergy.com Telephone: (432)-221-7331

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

|                |               |
|----------------|---------------|
| Incident ID    | nAB1815749006 |
| District RP    | 2RP-4775      |
| Facility ID    |               |
| Application ID |               |

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate OCD District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 3-20-2020

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: Bradford Billings Date: 10/25/2022

Printed Name: Bradford Billings Title: E.Spec.A

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

MAY 31 2018

Form C-141  
Revised April 3, 2017

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

DISTRICT II ARTESIA O.O.D.  
Submit to the appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

|                                                                                         |                                           |
|-----------------------------------------------------------------------------------------|-------------------------------------------|
| Name of Company: XTO Energy                                                             | Contact: Kyle Littrell                    |
| Address: 3104 E. Greene St., Carlsbad, N.M. 88220                                       | Telephone No: 432-221-7331                |
| Facility Name: PLU Big Sinks 25 Federal Battery (API - Poker Lake Unit CVX JV BS #005H) | Facility Type: Exploration and Production |

|                        |                        |                      |
|------------------------|------------------------|----------------------|
| Surface Owner: Federal | Mineral Owner: Federal | API No: 30-015-39018 |
|------------------------|------------------------|----------------------|

## LOCATION OF RELEASE

|                  |               |                 |              |                     |                           |                       |                        |                |
|------------------|---------------|-----------------|--------------|---------------------|---------------------------|-----------------------|------------------------|----------------|
| Unit Letter<br>O | Section<br>25 | Township<br>24S | Range<br>30E | Feet from the<br>32 | North/South Line<br>South | Feet from the<br>2400 | East/West Line<br>East | County<br>Eddy |
|------------------|---------------|-----------------|--------------|---------------------|---------------------------|-----------------------|------------------------|----------------|

Latitude 32.181688 Longitude -103.832976 NAD83

## NATURE OF RELEASE

|                                                                                                                                          |                                                                                                                                  |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Type of Release<br>Oil and produced water                                                                                                | Volume of Release<br>< 1/4 bbl                                                                                                   | Volume Recovered<br>0 bbl                      |
| Source of Release<br>Flare                                                                                                               | Date and Hour of Occurrence<br>5/18/2018, AM                                                                                     | Date and Hour of Discovery<br>5/18/18, 7:00 AM |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>Mike Bratcher and Crystal Weaver (NMOCD), Jim Amos and Shelly Tucker (BLM), Mark Naranjo and Ryan Mann (SLO) |                                                |
| By Whom? Kyle Littrell                                                                                                                   | Date and Hour: 5/18/2018, 8:55 AM                                                                                                |                                                |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                        | If YES, Volume Impacting the Watercourse.<br>N/A                                                                                 |                                                |

If a Watercourse was Impacted, Describe Fully.\*  
N/A

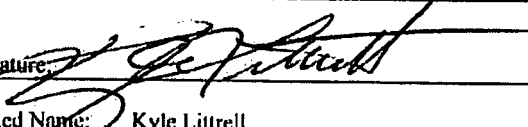
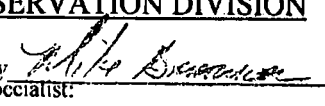
Describe Cause of Problem and Remedial Action Taken.\*

Flare line loaded up and caused fluid to exit the flare stack, resulting in a small fire. The fire extinguished itself. The location was shut in until repairs could be made.

Describe Area Affected and Cleanup Action Taken.\*

The fire affected a small section of pad due west of the flare. There was no impact to the pasture. An environmental contractor has been retained to assist with remediation efforts.

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

|                                                                                                |                                                                                                                                           |                      |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Signature:  | OIL CONSERVATION DIVISION                                                                                                                 |                      |
| Printed Name: Kyle Littrell                                                                    | Signed By: <br>Approved by Environmental Specialist: |                      |
| Title: Environmental Coordinator                                                               | Approval Date: 6/5/18                                                                                                                     | Expiration Date: N/A |
| E-mail Address: Kyle_Littrell@xtoenergy.com                                                    | Conditions of Approval: See Attached                                                                                                      | Attached: 2PP-4779   |
| Date: 5/30/2018                                                                                | Phone: 432-221-7331                                                                                                                       |                      |

\* Attach Additional Sheets If Necessary

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4779 |
| Facility ID    |          |
| Application ID |          |

## Release Notification

### Responsible Party

|                                                                     |                                   |
|---------------------------------------------------------------------|-----------------------------------|
| Responsible Party: XTO Energy, Inc                                  | OGRID: 5380                       |
| Contact Name: Kyle Littrell                                         | Contact Telephone: (432)-221-7331 |
| Contact email: Kyle_Littrell@xtoenergy.com                          | Incident #: 2RP-4779              |
| Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220 |                                   |

### Location of Release Source

Latitude N 32.181688 Longitude W 103.832976  
(NAD 83 in decimal degrees to 5 decimal places)

|                                             |                                     |
|---------------------------------------------|-------------------------------------|
| Site Name: PLU Big Sinks 25 Federal Battery | Site Type: Production Well Facility |
| Date Release Discovered: 5/18/2018          | API# (if applicable): 30-015-39018  |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| O           | 25      | 24S      | 30E   | 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)

|                                               |                                                                                |                                                          |
|-----------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> Crude Oil | Volume Released (bbls): < ¼ bbl oil and produced water combined                | Volume Recovered (bbls): 0                               |
| <input type="checkbox"/> Produced Water       | Volume Released (bbls):                                                        | Volume Recovered (bbls): 0                               |
|                                               | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate           | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas          | Volume Released (Mcf)                                                          | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)     | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units)                  |

#### Cause of Release

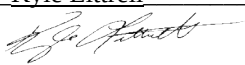
The flare line loaded up and caused fluid to exit the flare stack, resulting in a small fire.

|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4779 |
| Facility ID    |          |
| Application ID |          |

|                                                                                                                                       |                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release?<br>Release volume was less than 25 bbls. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?                          |                                                                                                                               |

### Initial Response

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
| <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                   |
| <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |
| <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
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| Printed Name: <u>Kyle Littrell</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Title: <u>SH&amp;E Supervisor</u> |
| Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: <u>3-20-2020</u>            |
| email: <u>Kyle_Littrell@xtoenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Telephone: <u>432-221-7331</u>    |
| <b><u>OCD Only</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                   |
| Received by: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date: _____                       |



|                |          |
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| Incident ID    |          |
| District RP    | 2RP-4779 |
| Facility ID    |          |
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## 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?                                                                                                           | <u>&gt;100</u> (ft bgs)                                             |
| Did this release impact groundwater or surface water?                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
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| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?                                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

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|                |          |
|----------------|----------|
| Incident ID    |          |
| District RP    | 2RP-4779 |
| 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: 3-20-2020

email: Kyle\_Littrell@xtoenergy.com Telephone: (432)-221-7331

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

|                |               |
|----------------|---------------|
| Incident ID    | nAB1815757186 |
| District RP    | 2RP-4779      |
| Facility ID    |               |
| Application ID |               |

## Closure

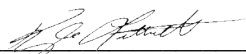
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 3-20-2020

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by:  Date: 10/25/2022

Printed Name: Bradford Billings Title: E.Spec.A

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

|                                                                                                                                                                                                                    |                         |                            |                               |          |                  |              |                |                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------|-------------------------------|----------|------------------|--------------|----------------|------------------------------------------------------------------|
|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                         | Identifier:<br><b>SS10</b> | Date:<br><b>2/6/19</b>        |          |                  |              |                |                                                                  |
| Project Name:<br>PLU CVX JV 5H                                                                                                                                                                                     |                         | RP Number:<br>2RP-2526     |                               |          |                  |              |                |                                                                  |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                         | Logged By: MAW             | Method: Backhoe               |          |                  |              |                |                                                                  |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  | Field Screening:<br>PID | Hole Diameter:<br>NA       | Total Depth:<br><b>4' bgs</b> |          |                  |              |                |                                                                  |
| Comments:                                                                                                                                                                                                          |                         |                            |                               |          |                  |              |                |                                                                  |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm)          | Vapor (ppm)                | Staining                      | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 0                |              |                | CALICHE, BUFF, DRY, LOOSE, HARD                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 1                |              |                |                                                                  |
|                                                                                                                                                                                                                    | 128                     | 0.3                        | 0.3                           | SS10A    | 2                |              |                | SANDY SILT, RED BROWN, DRY, LOOSE, 30% F SAND. NO OODOR NO STAIN |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 3                |              |                |                                                                  |
|                                                                                                                                                                                                                    | 128                     | 0.1                        |                               | SS10B    | 4                |              |                | TO 4' bgs                                                        |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 5                |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 6                |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 7                |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 8                |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 9                |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 10               |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 11               |              |                |                                                                  |
|                                                                                                                                                                                                                    |                         |                            |                               |          | 12               |              |                |                                                                  |



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                | Identifier:<br>SS12            | Date:<br>2/6/19                                                               |          |                  |              |                |                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------|-------------------------------------------------------------------------------|----------|------------------|--------------|----------------|--------------------------------------------------------------|
|                                                                                                                                                                                                                    |                | Project Name:<br>PLU CVX JV 5H | RP Number:<br>2RP-2526                                                        |          |                  |              |                |                                                              |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |                                |                                                                               |          |                  |              |                |                                                              |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  |                | Field Screening:<br>PID        | Logged By: MAW<br>Method: Backhoe<br>Hole Diameter: NA<br>Total Depth: 4' bgs |          |                  |              |                |                                                              |
| Comments:                                                                                                                                                                                                          |                |                                |                                                                               |          |                  |              |                |                                                              |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm)                    | Staining                                                                      | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                            |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 0                |              |                | CALICHE, DRY, LOOSE, HARD, BUFF                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 1                |              |                |                                                              |
|                                                                                                                                                                                                                    | 38             | 1.0                            |                                                                               | SS12A    | 2                |              |                | SANDY SILT, RUDDY, DRY, LOOSE, 30% F SAND, NO ODOR, NO STAIN |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 3                |              |                |                                                              |
|                                                                                                                                                                                                                    | 28             | 1.1                            |                                                                               | SS12B    | 4                |              |                | CALICHE, SAME TD @ 4' bgs                                    |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 5                |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 6                |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 7                |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 8                |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 9                |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 10               |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 11               |              |                |                                                              |
|                                                                                                                                                                                                                    |                |                                |                                                                               |          | 12               |              |                |                                                              |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                | Identifier:<br><b>SS23</b> | Date:<br><b>2/11/19</b> |          |                  |              |                |                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|-------------------------|----------|------------------|--------------|----------------|---------------------------------------------------------------|
| Project Name:<br>PLU CVX JV 5H                                                                                                                                                                                     |                | RP Number:<br>2RP-2526     |                         |          |                  |              |                |                                                               |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |                            |                         |          |                  |              |                |                                                               |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  |                | Field Screening:<br>PID    |                         |          |                  |              |                |                                                               |
| Logged By: MAW                                                                                                                                                                                                     |                | Method: Backhoe            |                         |          |                  |              |                |                                                               |
| Hole Diameter:<br>NA                                                                                                                                                                                               |                | Total Depth: <b>4' bgs</b> |                         |          |                  |              |                |                                                               |
| Comments:                                                                                                                                                                                                          |                |                            |                         |          |                  |              |                |                                                               |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm)                | Staining                | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                             |
|                                                                                                                                                                                                                    |                |                            |                         |          | 0                |              |                | CALICHE, HARD, DRY, BUFF                                      |
|                                                                                                                                                                                                                    |                |                            |                         |          | 1                |              |                |                                                               |
|                                                                                                                                                                                                                    | 28             | 0.5                        |                         | SS23     | 2                |              |                | SANDY SILT, RED-BRN, LOOSE, DRY, 30% F SAND, NO DOOR NO STAIN |
|                                                                                                                                                                                                                    |                |                            |                         |          | 3                |              |                |                                                               |
|                                                                                                                                                                                                                    | 35             | 0.1                        |                         | SS23A    | 4                |              |                | TO 4' bgs                                                     |
|                                                                                                                                                                                                                    |                |                            |                         |          | 5                |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 6                |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 7                |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 8                |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 9                |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 10               |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 11               |              |                |                                                               |
|                                                                                                                                                                                                                    |                |                            |                         |          | 12               |              |                |                                                               |



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                | Identifier:<br><b>SS24</b>    | Date:<br><b>2/11/19</b> |          |                  |              |                |                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------|-------------------------|----------|------------------|--------------|----------------|-----------------------------------------------------------|
| Project Name:<br>PLU CVX JV 5H                                                                                                                                                                                     |                | RP Number:<br>2RP-2526        |                         |          |                  |              |                |                                                           |
| Logged By: MAW                                                                                                                                                                                                     |                | Method: Backhoe               |                         |          |                  |              |                |                                                           |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  |                | Field Screening:<br>PID       |                         |          |                  |              |                |                                                           |
| Hole Diameter:<br>NA                                                                                                                                                                                               |                | Total Depth:<br><b>4' bgs</b> |                         |          |                  |              |                |                                                           |
| Comments:                                                                                                                                                                                                          |                |                               |                         |          |                  |              |                |                                                           |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm)                   | Staining                | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                         |
|                                                                                                                                                                                                                    | 82             | 0.3                           |                         |          | 0                |              |                | CALICHE, BOFF, DRY, LOOSE, HARD                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 1                |              |                | - SANDY SILT, RED BROWN, DRY, LOOSE, 70% F SAND, NO ODOOR |
|                                                                                                                                                                                                                    |                |                               |                         |          | 2                |              |                | - NO STAIN                                                |
|                                                                                                                                                                                                                    |                |                               |                         |          | 3                |              |                | - CALICHE, SAME                                           |
|                                                                                                                                                                                                                    | 133            | 1.7                           |                         |          | 4                |              |                | - TO 4' bgs                                               |
|                                                                                                                                                                                                                    |                |                               |                         |          | 5                |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 6                |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 7                |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 8                |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 9                |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 10               |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 11               |              |                |                                                           |
|                                                                                                                                                                                                                    |                |                               |                         |          | 12               |              |                |                                                           |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                         | Identifier:<br><b>SS25</b> | Date:<br><b>2/4/19</b>         |          |                  |              |                |                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------|--------------------------------|----------|------------------|--------------|----------------|------------------------------------------------------------------------------|
| Project Name:<br>PLU CVX JV SH                                                                                                                                                                                     |                         | RP Number:<br>2RP-2526     |                                |          |                  |              |                |                                                                              |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                         | Logged By: MAW             | Method: Backhoe                |          |                  |              |                |                                                                              |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  | Field Screening:<br>PID | Hole Diameter:<br>NA       | Total Depth:<br><b>4' logs</b> |          |                  |              |                |                                                                              |
| Comments:                                                                                                                                                                                                          |                         |                            |                                |          |                  |              |                |                                                                              |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm)          | Vapor (ppm)                | Staining                       | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                            |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 0                |              |                | CALICHE, BLUFF, DRY, LOOSE, HARD                                             |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 1                |              |                |                                                                              |
|                                                                                                                                                                                                                    | L28                     | 0.9                        |                                | SS25     | 2                |              |                | SUTY SAND, NO BDN, DRY, LOOSE, 30% F SAND, NO ODR, NO STAN, SOME CLAY, ROOTS |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 3                |              |                |                                                                              |
|                                                                                                                                                                                                                    | L28                     | 0.8                        |                                | SS25A    | 4                |              |                | CALICHE, SAND TO 0 4' bgs                                                    |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 5                |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 6                |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 7                |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 8                |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 9                |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 10               |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 11               |              |                |                                                                              |
|                                                                                                                                                                                                                    |                         |                            |                                |          | 12               |              |                |                                                                              |



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                | Identifier:<br><b>5527</b> | Date:<br><b>2/11/19</b>                                                              |          |                  |              |                |                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|--------------------------------------------------------------------------------------|----------|------------------|--------------|----------------|--------------------------------------------------------------------------------|
| Project Name:<br>PLU CVX JV 5H                                                                                                                                                                                     |                | RP Number:<br>2RP-2526     |                                                                                      |          |                  |              |                |                                                                                |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |                            |                                                                                      |          |                  |              |                |                                                                                |
| Lat/Long:<br>32.18193, -103.83318                                                                                                                                                                                  |                | Field Screening:<br>PID    | Logged By: MAW<br>Method: Backhoe<br>Hole Diameter: NA<br>Total Depth: <b>4' bgs</b> |          |                  |              |                |                                                                                |
| Comments:                                                                                                                                                                                                          |                |                            |                                                                                      |          |                  |              |                |                                                                                |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm)                | Staining                                                                             | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                              |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 0                |              |                | CALICHE, BOTT, DRY, HARD, LOOSE                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 1                |              |                |                                                                                |
|                                                                                                                                                                                                                    | <28            | 0.1                        |                                                                                      |          | 2                |              |                | - SANDY SILT, RED BROWN, DRY, LOOSE, 30% F SAND, SOME CLAY, NO ODOOR, NO STAIN |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 3                |              |                |                                                                                |
|                                                                                                                                                                                                                    | <28            | 0.4                        |                                                                                      |          | 4                |              |                | - TO 4' bgs                                                                    |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 5                |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 6                |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 7                |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 8                |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 9                |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 10               |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 11               |              |                |                                                                                |
|                                                                                                                                                                                                                    |                |                            |                                                                                      |          | 12               |              |                |                                                                                |

|                                                                                                                                                                                                                |  |                                     |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|--------------------------|
| <br>LT Environmental, Inc.<br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |  | Identifier:<br>PH01                 | Date:<br>04/02/2019      |
| LITHOLOGIC / SOIL SAMPLING LOG                                                                                                                                                                                 |  | Project Name:<br>PLU By Site 25R Hg | RP Number:<br>ZRP 2526   |
| Lat/Long:<br>32°10'54.6285" -103°49'58.9003"                                                                                                                                                                   |  | Field Screening:<br>Chlorides, PID  | Logged By:<br>L. Lambach |
| Comments:<br>Vertical delineation                                                                                                                                                                              |  | Hole Diameter:<br>2.5'              | Method:<br>Backhoe       |
| Total Depth:<br>13'                                                                                                                                                                                            |  |                                     |                          |

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                          |
|------------------|----------------|-------------|----------|----------|------------------|--------------|----------------|------------------------------------------------------------|
|                  |                |             |          |          | 0                |              |                | Caliche - pad                                              |
|                  |                |             |          |          | 1                |              |                | clayey sand, compressible, damp N-odor                     |
|                  |                |             |          |          | 2                |              |                | Excavated out                                              |
|                  |                |             |          |          | 3                |              |                |                                                            |
|                  | (1116)<br>2.2  |             |          |          | 4                |              |                | 4' bgs (Composite FS @ Excavation depth)                   |
|                  |                |             |          |          | 5                |              |                | clayey sand, compressible, damp, low plasticity<br>N-odor  |
| M                |                |             | N        |          | 5.5'             |              |                |                                                            |
| M                | 3.6<br>(2488)  | 33.8        | Y        |          | 6'               |              | caliche        | caliche, damp, odor, brown/tan, looks stained<br>flaky     |
|                  |                |             |          |          | 7                |              |                |                                                            |
| D                | 3.2<br>(2032)  | 24.3        | N        |          | 8'               |              | caliche        | tan, soft, sand consistency, 1" rocks<br>N-odor, not dense |
|                  |                |             |          |          | 9                |              |                |                                                            |
| D                | (1116)<br>1.4  | 10.6        | N        |          | 10'              |              |                |                                                            |
|                  |                |             |          |          | 11               |              |                |                                                            |
| Dry              | (1116)<br>1.2  | 15.5        |          |          | 12'              |              |                |                                                            |
|                  |                |             |          |          | 13'              |              |                |                                                            |

1.4 (1116) 13.4 PH01 13'





LT Environmental, Inc.  
Advancing Sustainability



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

Compliance · Engineering · Remediation

Identifier:

PH02

Date:

04/02/2019

Project Name:

PLU BS 25 Battery

RP Number:

2RP 2526

### LITHOLOGIC / SOIL SAMPLING LOG

Logged By: L. Lammach

Method: trenchbox

Hole Diameter:

2.5'

Total Depth:

Lat/Long:

32°10'54.4795", -103°49'58.869"

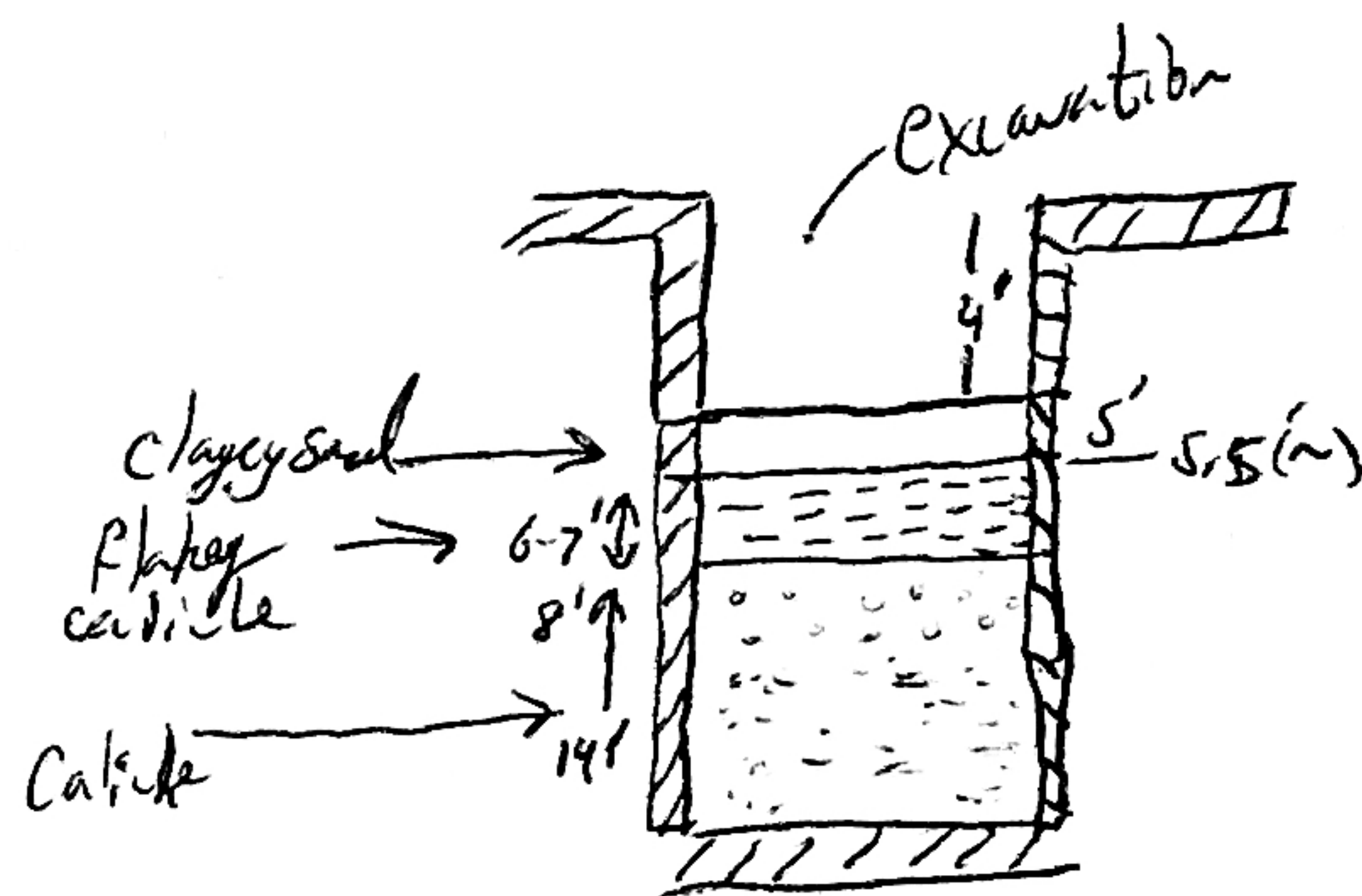
Field Screening:

PID chlorides

Comments:

Vertical delineation

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                         |
|------------------|----------------|-------------|----------|----------|------------------|--------------|----------------|-------------------------------------------|
|                  |                |             |          |          | 0                |              |                |                                           |
|                  |                |             |          |          | 1                |              |                |                                           |
|                  |                |             |          |          | 2                |              |                |                                           |
|                  |                |             |          |          | 3                |              |                |                                           |
|                  |                |             |          |          | 4                |              |                |                                           |
|                  |                |             |          |          | 5                |              |                |                                           |
| dry              | 1.6<br>(1116)  | 17.5        |          |          | 6'               |              | caliche        | flaky, tan w/ brown                       |
| dry              | 2.0<br>(1116)  | 11.5        |          |          | 8'               |              | caliche        | tan soft, no odor, 50% fines, 1/16" rocks |
| dry              | 3.0<br>(1744)  | 13.0        |          |          | 10'              |              |                |                                           |
|                  |                |             |          |          | 11               |              |                |                                           |
| dry              | (1116)<br>2.2  | 11.7        |          |          | 12'              |              |                |                                           |
|                  |                |             |          |          |                  |              |                |                                           |
| dry              | 1.2<br>(1116)  | 9.2         |          |          | 14'              |              |                |                                           |



excavation extent  
clayey sand, no odor, brown, damp, low plasticity

cool to touch

grainy/coarse, non plastic

16' / PID chlorides  
24.2 / 1 ml

PH02





LT Environmental, Inc.  
Advancing Sustainability



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

Compliance · Engineering · Remediation

Identifier:

P11-3

Date:

04/02/2019

Project Name:

PLU BS 25 Battery

RP Number:

2 RP 2526

### LITHOLOGIC / SOIL SAMPLING LOG

Logged By:

L. Lammach

Method:

Tracklog

Lat/Long:

32°10' 54.5471" -103°49'59.333"

Field Screening:

Chloride, PID

Hole Diameter:

2.5'

Total Depth:

8'

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                   |
|------------------|----------------|-------------|----------|----------|------------------|--------------|----------------|---------------------------------------------------------------------|
|                  |                |             |          |          | 0                |              |                |                                                                     |
|                  |                |             |          |          | 1                |              |                |                                                                     |
|                  |                |             |          |          | 2                |              |                |                                                                     |
|                  |                |             |          |          | 3                |              |                |                                                                     |
|                  |                |             |          |          | 4                |              |                | excavation extent                                                   |
| M                |                |             |          |          | 5                |              |                | clayey sand, brown, no odor                                         |
| dry              | 2.8 (1572)     | 23.2        |          |          | 6                |              |                | tan, 1/2" rabs, flint, 50/50, gray, non plastic low density no odor |
|                  |                |             |          |          | 7                |              |                |                                                                     |
| dry              | ND             | 4.3         |          | P11-3    | 8                |              |                | tan, lighter than 6-7' previous, no odor                            |
|                  |                |             |          |          | 9                |              |                | deepest depth                                                       |
|                  |                |             |          |          | 10               |              |                |                                                                     |
|                  |                |             |          |          | 11               |              |                |                                                                     |
|                  |                |             |          |          | 12               |              |                |                                                                     |





LT Environmental, Inc.  
A subsidiary of



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

Compliance · Engineering · Remediation

Identifier:

PH-4

Date:

04/03/2019

Project Name:

PLUBS 25 Rdy

RP Number:

2RP 2526

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:

L. Lannabach

Method:

Trackhoe

Lat/Long:

Field Screening:

Chloride, PTD

Hole Diameter:

2.5'

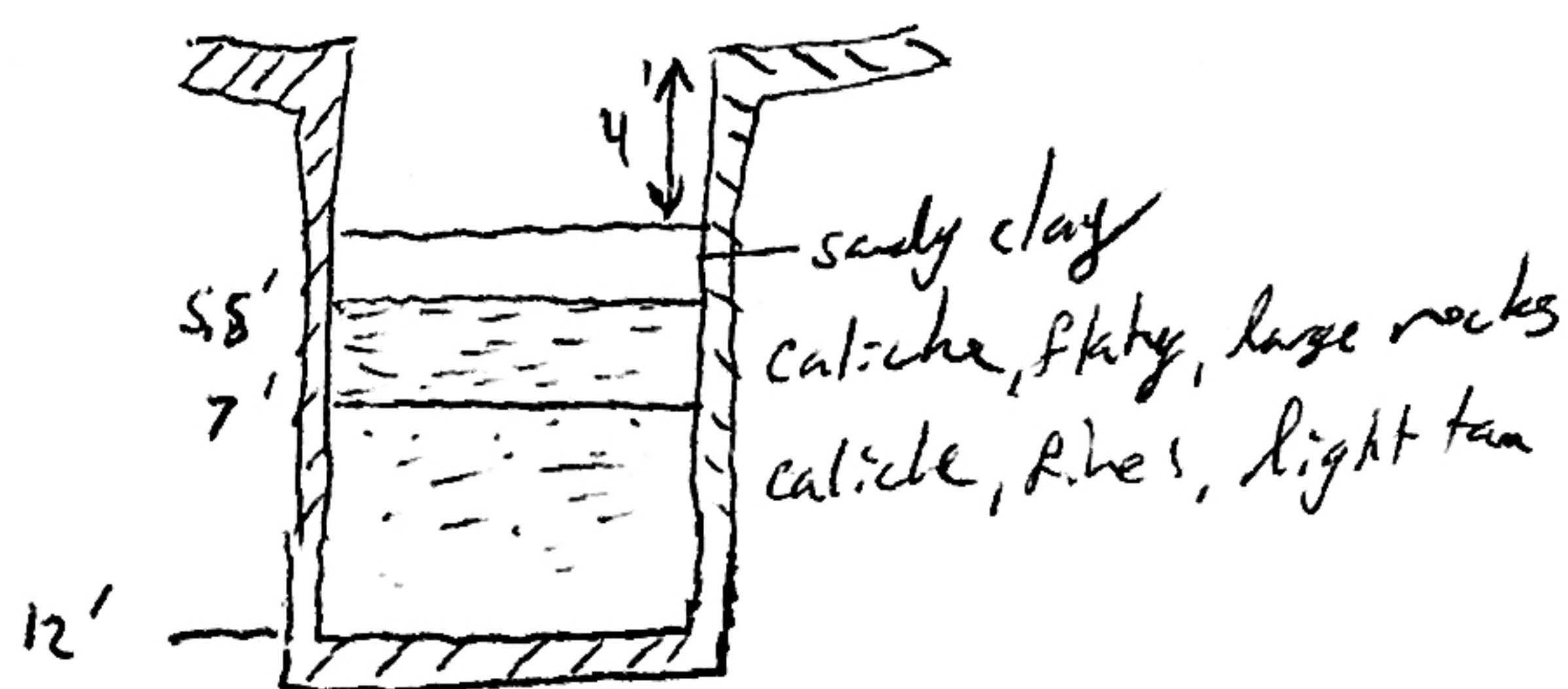
Total Depth:

12'

Comments:

Vertical delamination

| Moisture Content | Chloride (ppm)         | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                |
|------------------|------------------------|-------------|----------|----------|------------------|--------------|----------------|------------------------------------------------------------------|
|                  |                        |             |          |          | 0                |              |                |                                                                  |
|                  |                        |             |          |          | 1                |              |                |                                                                  |
|                  |                        |             |          |          | 2                |              |                |                                                                  |
|                  |                        |             |          |          | 3                |              |                |                                                                  |
|                  |                        |             |          |          | 4                |              |                |                                                                  |
|                  |                        |             |          |          | 5                |              | SC             | clayey sand<br>5.5' caliche                                      |
| Dry              | 3.8<br>(2544)          | 267.4       |          |          | 6                |              | caliche        | hard dig - smells like odor tan, coarse, 1/8" rocks<br>10% d.l.s |
|                  |                        |             |          |          | 7                |              |                |                                                                  |
| dry              | 2.6<br>(1412)          | 6.6         |          |          | 8                |              |                | so/s0 fines No odor                                              |
|                  |                        |             |          |          | 9                |              |                |                                                                  |
| dry              | 1.2<br>3.8(R)<br>(536) | 4.1         |          |          | 10               |              |                | no odor, 1/16"-1/8" rocks                                        |
|                  |                        |             |          |          | 11               |              |                |                                                                  |
| dry              | (260)<br>2.6(R)        | 2.8         |          | PH-4     | 12               |              |                |                                                                  |



dry (1412) ff

extent



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>A proud member of WSP |                  | BH or PH Name:<br>PHOS                                                              |                | Date:<br>4/17/19                                                                      |                       |                |                  |                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|-----------------------|----------------|------------------|------------------------------------------------------------|
|                                                                                                                                                                                                   |                  | Site Name: PLU CVX JV BS #005<br>RP or Incident Number: 2RP-2526<br>LTE Job Number: |                |                                                                                       |                       |                |                  |                                                            |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                             |                  |                                                                                     |                |                                                                                       |                       |                |                  |                                                            |
| Lat/Long: Collector                                                                                                                                                                               |                  | Field Screening:<br>Chloride, PID                                                   |                | Logged By: Anna Byers<br>Hole Diameter: N/A<br>Method: Track Hoe<br>Total Depth: 6.5' |                       |                |                  |                                                            |
| Comments:<br>BDL - Below Detection Limit; * Cl- values reported include 40% correction factor                                                                                                     |                  |                                                                                     |                |                                                                                       |                       |                |                  |                                                            |
| Moisture Content                                                                                                                                                                                  | Chloride * (ppm) | Vapor (ppm)                                                                         | Staining       | Sample #                                                                              | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                          |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 0              |                  |                                                            |
| D <sub>y</sub>                                                                                                                                                                                    | 172.8            | Ø                                                                                   | N <sub>o</sub> | —                                                                                     | 0.5'                  |                |                  | pad surface caliche, well compact, no staining             |
| D                                                                                                                                                                                                 | BDL              | Ø                                                                                   | N              | —                                                                                     | 1'                    |                |                  | caliche                                                    |
| D                                                                                                                                                                                                 | BDL              | Ø                                                                                   | N              | —                                                                                     | 2'                    |                |                  | grey to light grey to white colored, well-cemented caliche |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 3              |                  |                                                            |
| D                                                                                                                                                                                                 | BDL              | Ø                                                                                   | N              | PHOS                                                                                  | 3.5'                  |                |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 4              |                  |                                                            |
| D                                                                                                                                                                                                 | 262.4            | Ø                                                                                   | N              | —                                                                                     | 4.5'                  |                |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 5              |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 6              |                  |                                                            |
| D                                                                                                                                                                                                 | 172.8            | Ø                                                                                   | N              | PHOS A                                                                                | 6.5'                  |                |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 7              |                  | Tot DEPTH                                                  |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 8              |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 9              |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 10             |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 11             |                  |                                                            |
|                                                                                                                                                                                                   |                  |                                                                                     |                |                                                                                       |                       | 12             |                  |                                                            |

|  <p><b>LT Environmental, Inc.</b><br/>508 West Stevens Street<br/>Carlsbad, New Mexico 88220</p> <p>A proud member of WSP      Compliance · Engineering · Remediation</p> |                 | BH or PH Name:                             |                | Date:                 |                       |                |                  |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------|----------------|-----------------------|-----------------------|----------------|------------------|------------------------------------------------------------|
|                                                                                                                                                                                                                                                            |                 | Photo                                      |                | 4 / 17 / 19           |                       |                |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 | Site Name: PLU CVX JV BS #005              |                |                       |                       |                |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 | RP or Incident Number: 2RP-2526 & 2RP-4327 |                |                       |                       |                |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 | LTE Job Number:                            |                |                       |                       |                |                  |                                                            |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                                      |                 |                                            |                |                       |                       |                |                  |                                                            |
| Lat/Long:                                                                                                                                                                                                                                                  |                 | Field Screening:                           |                | Logged By: Anna Byers |                       |                |                  |                                                            |
| Collector                                                                                                                                                                                                                                                  |                 | Chloride, PID                              |                | Method: Track Hoe     |                       |                |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                | Hole Diameter: N/A    |                       |                |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                | Total Depth:          |                       |                |                  |                                                            |
| Comments: BDL - Below Detection Limit; Cl <sup>-</sup> values reported include 40-60% correction factor                                                                                                                                                    |                 |                                            |                |                       |                       |                |                  |                                                            |
| Moisture Content                                                                                                                                                                                                                                           | Chloride* (ppm) | Vapor (ppm)                                | Staining       | Sample #              | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                          |
| Dry                                                                                                                                                                                                                                                        | 1952            | Ø                                          | N <sub>o</sub> | Photo                 | 0.5'                  | 0              |                  | pad surface caliche                                        |
| D                                                                                                                                                                                                                                                          | 556.8           | Ø                                          | N              | —                     | 1'                    | 1              | caliche          | white to grey colored, moderated alk comp cemented caliche |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 2              |                  |                                                            |
| D                                                                                                                                                                                                                                                          | 371.2           | Ø                                          | N              | Photo A               | 2.5'                  | 3              |                  |                                                            |
| D                                                                                                                                                                                                                                                          | 428.8           | Ø                                          | N              | —                     | 3'                    | 4              |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 5              |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 6              |                  |                                                            |
| D                                                                                                                                                                                                                                                          | 172.8           | Ø                                          | N              | —                     | 4.5'                  | 7              |                  | " well-cemented                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 8              |                  |                                                            |
| D                                                                                                                                                                                                                                                          | BDL             | Ø                                          | N              | Photo B               | 6.5'                  | 9              |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 10             |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 11             |                  |                                                            |
|                                                                                                                                                                                                                                                            |                 |                                            |                |                       |                       | 12             |                  |                                                            |

Tot Depth

AS



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>A proud member of WSP<br>Compliance · Engineering · Remediation |                 | BH or PH Name:   |                | Date:          |                       |                |                  |                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|----------------|----------------|-----------------------|----------------|------------------|---------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                             |                 | PH07             |                | 4/17/19        |                       |                |                  |                                                                                             |
| Site Name: PLU CVX JV BS #005H                                                                                                                                                                                                              |                 |                  |                |                |                       |                |                  |                                                                                             |
| RP or Incident Number: ZRP-2526                                                                                                                                                                                                             |                 |                  |                |                |                       |                |                  |                                                                                             |
| LTE Job Number:                                                                                                                                                                                                                             |                 |                  |                |                |                       |                |                  |                                                                                             |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                       |                 |                  |                |                |                       |                |                  |                                                                                             |
| Lat/Long:                                                                                                                                                                                                                                   |                 | Field Screening: |                | Hole Diameter: |                       |                |                  |                                                                                             |
| Collector                                                                                                                                                                                                                                   |                 | Chloride, PID    |                | N/A            |                       |                |                  |                                                                                             |
| Comments:                                                                                                                                                                                                                                   |                 | Total Depth:     |                |                |                       |                |                  |                                                                                             |
| BDL - Below Detection Limit ; *                                                                                                                                                                                                             |                 | 4.5'             |                |                |                       |                |                  |                                                                                             |
| α values reported include 40%-60% correction factor                                                                                                                                                                                         |                 |                  |                |                |                       |                |                  |                                                                                             |
| Moisture Content                                                                                                                                                                                                                            | Chloride* (ppm) | Vapor (ppm)      | Staining       | Sample #       | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                                                           |
| D                                                                                                                                                                                                                                           | BDL             | Ø                | N <sub>0</sub> | —              | 0.5'                  | 0              |                  | pad surface caliche, well-compact<br>white to grey colored, well-cemented caliche<br>↓<br>↓ |
| D                                                                                                                                                                                                                                           | BDL             | Ø                | N              | —              | 1                     | 1              |                  |                                                                                             |
| D                                                                                                                                                                                                                                           | 172.8           | Ø                | N              | —              | 2                     | 2              |                  |                                                                                             |
| D                                                                                                                                                                                                                                           | 262.4           | Ø                | N              | PH07           | 3                     | 3              |                  |                                                                                             |
| D                                                                                                                                                                                                                                           | 262.4           | Ø                | N              | PH07A          | 4.5'                  | 4              |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 5              |                  | Tot Depth                                                                                   |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 6              |                  |          |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 7              |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 8              |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 9              |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 10             |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 11             |                  |                                                                                             |
|                                                                                                                                                                                                                                             |                 |                  |                |                |                       | 12             |                  |                                                                                             |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>A proud member of WSP |                  | BH or PH Name:<br>PH08                                                               |          | Date:<br>4/17/19                                                                     |                       |                |                  |                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------|-----------------------|----------------|------------------|----------------------------------------------------------|
|                                                                                                                                                                                                   |                  | Site Name: PLU CVX JV BS #005H<br>RP or Incident Number: ZRP-2526<br>LTE Job Number: |          |                                                                                      |                       |                |                  |                                                          |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                             |                  |                                                                                      |          |                                                                                      |                       |                |                  |                                                          |
| Lat/Long: Collector                                                                                                                                                                               |                  | Field Screening:<br>Chloride, PID                                                    |          | Logged By: Anna Byers<br>Method: Track Hoe<br>Hole Diameter: N/A<br>Total Depth: 11' |                       |                |                  |                                                          |
| Comments: BDL - Below Detection Limit; *Cl- values include 40-60% correction factor; **TPH Ø indicates/represents                                                                                 |                  |                                                                                      |          |                                                                                      |                       |                |                  |                                                          |
| Moisture Content                                                                                                                                                                                  | * Chloride (ppm) | ** Vapor (ppm)                                                                       | Staining | Sample #                                                                             | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                        |
| Dry                                                                                                                                                                                               | 556.8            | Ø                                                                                    | N        | —                                                                                    | 0.5'                  | 0              |                  | pad surface caliche, well-compacted                      |
| D                                                                                                                                                                                                 | 492.8            | Ø                                                                                    | N        | —                                                                                    | 1'                    | 1              | caliche          | white to grey colored, moderate to well-cemented caliche |
| D                                                                                                                                                                                                 | 492.8            | Ø                                                                                    | N        | —                                                                                    | 2'                    | 2              |                  |                                                          |
| D                                                                                                                                                                                                 | 1382.4           | Ø                                                                                    | N        | —                                                                                    | 3'                    | 3              |                  |                                                          |
| D                                                                                                                                                                                                 | 2086.4           | Ø                                                                                    | N        | —                                                                                    | 4'                    | 4              |                  |                                                          |
|                                                                                                                                                                                                   |                  |                                                                                      |          |                                                                                      | 5'                    | 5              |                  |                                                          |
| D                                                                                                                                                                                                 | 2227.2           | Ø                                                                                    | N        | PH08                                                                                 | 6'                    | 6              |                  |                                                          |
|                                                                                                                                                                                                   |                  |                                                                                      |          |                                                                                      | 7'                    | 7              |                  |                                                          |
| D                                                                                                                                                                                                 | 1286.4           | Ø                                                                                    | N        | —                                                                                    | 8'                    | 8              |                  |                                                          |
|                                                                                                                                                                                                   |                  |                                                                                      |          |                                                                                      | 9'                    | 9              |                  |                                                          |
| D                                                                                                                                                                                                 | 371.2            | Ø                                                                                    | N        | —                                                                                    | 10'                   | 10             |                  |                                                          |
| D                                                                                                                                                                                                 | BDL              | Ø                                                                                    | N        | PH08A                                                                                | 11'                   | 11             |                  |                                                          |
|                                                                                                                                                                                                   |                  |                                                                                      |          |                                                                                      | 12'                   | 12             |                  | Tot DEPTH                                                |





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

A proud member  
of WSP

Compliance · Engineering · Remediation

BH or PH Name:

PH09

Date:

4/12/19

Site Name: PLU CVX JV BS #005H

RP or Incident Number: ZRP-2526

LTE Job Number:

### LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Collector

Field Screening:

Chloride, PID

Logged By: Anna Byers

Method: Track Hoe

Hole Diameter:

N/A

Total Depth:

7.5'

Comments:

within excavation; BDL - Below detection limit; D - Dry; N - No

| Moisture<br>Content | Chloride<br>*<br>(ppm) | Vapor<br>(ppm) | Staining | Sample # | Sample<br>Depth<br>(ft bgs) | Depth<br>(ft bgs) | USCS/Rock<br>Symbol | Lithology/Remarks                               |
|---------------------|------------------------|----------------|----------|----------|-----------------------------|-------------------|---------------------|-------------------------------------------------|
|                     |                        |                |          |          |                             | 0                 |                     |                                                 |
|                     |                        |                |          |          |                             | 1                 |                     |                                                 |
|                     |                        |                |          |          |                             | 2                 |                     |                                                 |
|                     |                        |                |          |          |                             | 3                 |                     |                                                 |
|                     |                        |                |          |          |                             | 4                 |                     |                                                 |
| D                   | 499.2                  | <15            | N        | PH09     | 4.5                         | 5                 |                     | caliche H grey, well compacted/cemented caliche |
| D                   | BDL                    | <15            | N        | —        | 5.5                         | 6                 |                     |                                                 |
| D                   | BDL                    | <15            | N        | —        | 6.5                         | 7                 |                     |                                                 |
| D                   | 198.4                  | <15            | N        | PH09A    | 7.5                         | 8                 |                     |                                                 |
|                     |                        |                |          |          |                             | 9                 |                     | TOT DEPTH                                       |
|                     |                        |                |          |          |                             | 10                |                     |                                                 |
|                     |                        |                |          |          |                             | 11                |                     |                                                 |
|                     |                        |                |          |          |                             | 12                |                     |                                                 |

\* Cl- ppm reported includes 40% correction factor  
-60%



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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------|----------------|---------------------------------|-----------------------|----------------|------------------|----------------------------------------------------|
|                                                                                                                                                                                                                                             |                 | Site Name: PLU CVX JV BS #005H |                | RP or Incident Number: 2RP-2526 |                       |                |                  |                                                    |
| LTE Job Number:                                                                                                                                                                                                                             |                 |                                |                |                                 |                       |                |                  |                                                    |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                       |                 |                                |                |                                 |                       |                |                  |                                                    |
| Lat/Long: Collector                                                                                                                                                                                                                         |                 | Field Screening: Chloride, PID |                | Logged By: Anna Byers           |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                | Method: Track Hoe               |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                | Hole Diameter: N/A              |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                | Total Depth: 12.5'              |                       |                |                  |                                                    |
| Comments: within excavation; * Cl <sup>-</sup> ppm value reported includes 40% <sup>-60%</sup> correction factor                                                                                                                            |                 |                                |                |                                 |                       |                |                  |                                                    |
| Moisture Content                                                                                                                                                                                                                            | Chloride* (ppm) | Vapor (ppm)                    | Staining       | Sample #                        | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                  |
|                                                                                                                                                                                                                                             |                 |                                |                |                                 |                       | 0.5            |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                |                                 |                       | 1.5            |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                |                                 |                       | 3.5            |                  |                                                    |
|                                                                                                                                                                                                                                             |                 |                                |                |                                 |                       | 4.5            |                  |                                                    |
| D <sub>ry</sub>                                                                                                                                                                                                                             | 1363.2          | <15                            | N <sub>o</sub> |                                 | 4.5'                  | 4.5            | caliche          | well cemented, light grey to white colored caliche |
| D                                                                                                                                                                                                                                           | 1004.8          | <15                            | N              |                                 | 5.5'                  | 5.5            |                  |                                                    |
| D                                                                                                                                                                                                                                           | 928             | <15                            | N              |                                 | 6.5'                  | 6.5            |                  |                                                    |
| D                                                                                                                                                                                                                                           | 723.2           | <15                            | N              |                                 | 7.5'                  | 7.5            |                  |                                                    |
| D                                                                                                                                                                                                                                           | 1824            | <15                            | N              | PH10                            | 8.5'                  | 8.5            |                  |                                                    |
| D                                                                                                                                                                                                                                           | 1260.8          | <15                            | N              |                                 | 9.5'                  | 9.5            |                  |                                                    |
| D                                                                                                                                                                                                                                           | —               | —                              | N              |                                 | 10.5'                 | 10.5           |                  |                                                    |
| D                                                                                                                                                                                                                                           | 556.8           | <15                            | N              |                                 | 11.5'                 | 11.5           |                  |                                                    |
| D                                                                                                                                                                                                                                           | 236.8           | <15                            | N              | PH10A                           | 12.5'                 | 12.5           |                  |                                                    |

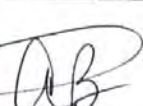
TOT DEPTH

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>A proud member of WSP<br>Compliance · Engineering · Remediation |                  | BH or PH Name:<br>PH11            |                | Date:<br>4/15/19                |                       |                |                  |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------|----------------|---------------------------------|-----------------------|----------------|------------------|----------------------------------------------------|
|                                                                                                                                                                                                                                             |                  | Site Name: PHU CVX JV BS #005H    |                | RP or Incident Number: 2RP-2526 |                       |                |                  |                                                    |
| LITHOLOGIC / SOIL SAMPLING LOG                                                                                                                                                                                                              |                  |                                   |                |                                 |                       |                |                  |                                                    |
| Lat/Long:<br>Collector                                                                                                                                                                                                                      |                  | Field Screening:<br>Chloride, PID |                | Logged By: Anna Byers           |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                | Method: Track Hoe               |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                | Hole Diameter: N/A              |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                | Total Depth: 11'                |                       |                |                  |                                                    |
| Comments: within excavation; * Cl <sup>-</sup> ppm values reported include 40% <sup>-60%</sup> correction factor                                                                                                                            |                  |                                   |                |                                 |                       |                |                  |                                                    |
| Moisture Content                                                                                                                                                                                                                            | Chloride * (ppm) | Vapor (ppm)                       | Staining       | Sample #                        | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                  |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 0              |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 1              |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 2              |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 3              |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 4              |                  |                                                    |
| D <sub>ry</sub>                                                                                                                                                                                                                             | 6483.2           | 4.6                               | N <sub>o</sub> | PH11                            | 4.5'                  |                |                  |                                                    |
| D                                                                                                                                                                                                                                           | 4633.2           | 4.1                               | N              | —                               | 5.5'                  |                | caliche          | light gray to white colored, well cemented caliche |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 6              |                  |                                                    |
| D                                                                                                                                                                                                                                           | 5056             | 5.0                               | N              | —                               | 7'                    |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 8              |                  |                                                    |
| D                                                                                                                                                                                                                                           | 3633.6           | 3.7                               | N              | —                               | 8'                    |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 9              |                  |                                                    |
| D                                                                                                                                                                                                                                           | 665.6            | 3.6                               | N              | —                               | 9'                    |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 10             |                  |                                                    |
| D                                                                                                                                                                                                                                           | 403.2            | 3.8                               | N              | —                               | 10'                   |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 11             |                  |                                                    |
| D                                                                                                                                                                                                                                           | 454.4            | 3.6                               | N              | PH11A                           | 11'                   |                |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       | 12             |                  |                                                    |
|                                                                                                                                                                                                                                             |                  |                                   |                |                                 |                       |                |                  | Tot DEPTH                                          |



\* Cl- ppm values reported include 40% correction factor  
-60%  
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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------|----------------|----------------------------------------|-----------------------|----------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------|
|                                                                                                                                                                                                                                               |                  | Site Name: <b>PLU CVX JV B5#0054</b> |                | RP or Incident Number: <b>2RP-2524</b> |                       |                |                                                                                                         |                                                    |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                         |                  | Logged By: <b>Anna Byers</b>         |                | Method: <b>Track Hoe</b>               |                       |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  | Hole Diameter: <b>N/A</b>            |                | Total Depth: <b>10.5'</b>              |                       |                |                                                                                                         |                                                    |
| Lat/Long: <b>Collector</b>                                                                                                                                                                                                                    |                  | Field Screening:<br>Chloride, PID    |                |                                        |                       |                |                                                                                                         |                                                    |
| Comments: <b>Within excavation; * Cl<sup>-</sup> ppm reported values include 40%-60% correction factor</b>                                                                                                                                    |                  |                                      |                |                                        |                       |                |                                                                                                         |                                                    |
| Moisture Content                                                                                                                                                                                                                              | Chloride * (ppm) | Vapor (ppm)                          | Staining       | Sample #                               | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol                                                                                        | Lithology/Remarks                                  |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 0              |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 1              |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 2              |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 3              |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 4              |                                                                                                         |                                                    |
| D <sub>γ</sub>                                                                                                                                                                                                                                | 1171.2           | 5.3                                  | N <sub>0</sub> | —                                      | 4.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 5              | caliche                                                                                                 | white to light grey colored, well cemented caliche |
| D                                                                                                                                                                                                                                             | 1593.6           | 6.7                                  | N              | —                                      | 5.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 6              |                                                                                                         |                                                    |
| D                                                                                                                                                                                                                                             | 1952             | 5.5                                  | N              | PH13                                   | 6.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 7              |                                                                                                         |                                                    |
| D                                                                                                                                                                                                                                             | BDL              | 4.3                                  | N              | —                                      | 7.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 8              |                                                                                                         |                                                    |
| D                                                                                                                                                                                                                                             | 620.8            | 5.8                                  | N              | —                                      | 8.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 9              |                                                                                                         |                                                    |
| D                                                                                                                                                                                                                                             | 556.8            | 6.1                                  | N              | —                                      | 9.5'                  |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 10             |                                                                                                         |                                                    |
| D                                                                                                                                                                                                                                             | 313.6            | 5.9                                  | N              | PH13A                                  | 10.5'                 |                |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 11             |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       | 12             |                                                                                                         |                                                    |
|                                                                                                                                                                                                                                               |                  |                                      |                |                                        |                       |                | <b>TOT DEPTH</b><br> |                                                    |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------|----------------|-----------------------|-----------------------|----------------|------------------|----------------------------------------------------|
|                                                                                                                                                                                                                                               |                 | PH13                           |                | 4/15/19               |                       |                |                  |                                                    |
| Site Name: PLU CVX JV BS#0054                                                                                                                                                                                                                 |                 |                                |                |                       |                       |                |                  |                                                    |
| RP or Incident Number: 2RP-2524                                                                                                                                                                                                               |                 |                                |                |                       |                       |                |                  |                                                    |
| LTE Job Number:                                                                                                                                                                                                                               |                 |                                |                |                       |                       |                |                  |                                                    |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                         |                 |                                |                |                       |                       |                |                  |                                                    |
| Lat/Long: Collector                                                                                                                                                                                                                           |                 | Field Screening: Chloride, PID |                | Logged By: Anna Byers |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                | Method: Track Hoe     |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                | Hole Diameter: N/A    |                       |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                | Total Depth: 10.5'    |                       |                |                  |                                                    |
| Comments: Within excavation; *Cl ppm reported values include 40% - 60% correction factor                                                                                                                                                      |                 |                                |                |                       |                       |                |                  |                                                    |
| Moisture Content                                                                                                                                                                                                                              | Chloride* (ppm) | Vapor (ppm)                    | Staining       | Sample #              | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                  |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 0              |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 1              |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 2              |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 3              |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 4              |                  |                                                    |
| D                                                                                                                                                                                                                                             | 1171.2          | 5.3                            | N <sub>0</sub> | —                     | 4.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 5              | caliche          | white to light grey colored, well cemented caliche |
| D                                                                                                                                                                                                                                             | 1593.6          | 6.7                            | N              | —                     | 5.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 6              |                  |                                                    |
| D                                                                                                                                                                                                                                             | 1952            | 5.5                            | N              | PH13                  | 6.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 7              |                  |                                                    |
| D                                                                                                                                                                                                                                             | BDL             | 4.3                            | N              | —                     | 7.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 8              |                  |                                                    |
| D                                                                                                                                                                                                                                             | 620.8           | 5.8                            | N              | —                     | 8.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 9              |                  |                                                    |
| D                                                                                                                                                                                                                                             | 556.8           | 6.1                            | N              | —                     | 9.5'                  |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 10             |                  |                                                    |
| D                                                                                                                                                                                                                                             | 313.6           | 5.9                            | N              | PH13A                 | 10.5'                 |                |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 11             |                  |                                                    |
|                                                                                                                                                                                                                                               |                 |                                |                |                       |                       | 12             |                  |                                                    |
| AB<br>TOT DEPTH                                                                                                                                                                                                                               |                 |                                |                |                       |                       |                |                  |                                                    |



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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|----------|-----------------------------------|---------------------------------------|------------------------------|-------------------------|-----------------------------------|--|
|                                                                                                                                                                                                                                               |                  |             |          |                                   | Site Name: <b>PLU CVX JV BS #0054</b> |                              |                         |                                   |  |
| RP or Incident Number: <b>2RP-4775 + 2RP-4779</b>                                                                                                                                                                                             |                  |             |          |                                   |                                       |                              |                         |                                   |  |
| LTE Job Number: <b>+ 2RP-2526</b>                                                                                                                                                                                                             |                  |             |          |                                   |                                       |                              |                         |                                   |  |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                                                         |                  |             |          |                                   |                                       |                              |                         |                                   |  |
| Lat/Long: <b>Collector</b>                                                                                                                                                                                                                    |                  |             |          | Field Screening:<br>Chloride, PID |                                       | Logged By: <b>Anna Byers</b> |                         | Method: <b>Track Hoe</b>          |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | Hole Diameter:<br><b>N/A</b> |                         | Total Depth:<br><b>1.0'</b>       |  |
| Comments: <b>BDL - Below Detection Limit; *Cl- values reported include 40%-60% correction factor</b>                                                                                                                                          |                  |             |          |                                   |                                       |                              |                         |                                   |  |
| Moisture Content                                                                                                                                                                                                                              | Chloride (ppm) * | Vapor (ppm) | Staining | Sample #                          | Sample Depth (ft bgs)                 | Depth (ft bgs)               | USCS/Rock Symbol        | Lithology/Remarks                 |  |
| Dry                                                                                                                                                                                                                                           | 172.6            | 6.8         | No       | PH14                              | 0.5'                                  | 0                            | caliche                 | pad surface caliche, well compact |  |
| Dry                                                                                                                                                                                                                                           | BDL              | 7.8         | No       | PH14A                             | 1.0'                                  | 1                            | ↓                       | ↓                                 |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 2                            | TOT DEPTH               |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 3                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 4                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 5                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 6                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 7                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 8                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 9                            |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 10                           |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 11                           |                         |                                   |  |
|                                                                                                                                                                                                                                               |                  |             |          |                                   |                                       | 12                           |                         |                                   |  |



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508 West Stevens Street  
Carlsbad, New Mexico 88220

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BH or PH Name:

PH16

Date:

4/17/19

Site Name: PLU CVX JV BS #005H

RP or Incident Number: 2RP-2526/2RP/1327/2RP-4398

LTE Job Number:

# LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Anna Byers

Method: Track Hoe

Lat/Long:

Collector

Field Screening:

Chloride, PID

Hole Diameter:

N/A

Total Depth:

2'

Comments:

\* Cl<sup>-</sup> ppm reported value includes 40%<sup>-60%</sup> correction factor

| Moisture Content | Chloride (ppm) * | Vapor (ppm) | Staining | Sample # | Sample Depth (ft bgs) | Depth (ft bgs) | USCS/Rock Symbol | Lithology/Remarks                                              |
|------------------|------------------|-------------|----------|----------|-----------------------|----------------|------------------|----------------------------------------------------------------|
| D                | 428.8            | Ø           | N        | PH16     | 0.5'                  | 0              | caliche          | Pad surface caliche (0-0.5') light grey to white well cemented |
| D                | 428.8            | Ø           | N        | —        | 1'                    | 1              | ↓                | caliche                                                        |
| D                | 556.8            | Ø           | N        | PH16A    | 2'                    | 2              | ↓                |                                                                |
| TOT DEPTH        |                  |             |          |          |                       |                |                  |                                                                |
|                  |                  |             |          |          |                       | 3              |                  |                                                                |
|                  |                  |             |          |          |                       | 4              |                  |                                                                |
|                  |                  |             |          |          |                       | 5              |                  |                                                                |
|                  |                  |             |          |          |                       | 6              |                  |                                                                |
|                  |                  |             |          |          |                       | 7              |                  |                                                                |
|                  |                  |             |          |          |                       | 8              |                  |                                                                |
|                  |                  |             |          |          |                       | 9              |                  |                                                                |
|                  |                  |             |          |          |                       | 10             |                  |                                                                |
|                  |                  |             |          |          |                       | 11             |                  |                                                                |
|                  |                  |             |          |          |                       | 12             |                  |                                                                |



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|  |                | <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220 |          | Identifier:<br>BH01                                 |                  | Date:<br>10-22-19     |                |                                                                                                  |
|-----------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------|----------|-----------------------------------------------------|------------------|-----------------------|----------------|--------------------------------------------------------------------------------------------------|
|                                                                                   |                |                                                                                        |          | Project Name:<br>AV Big Sinks 25<br>Federal Battery |                  | RP Number:<br>RP-4398 |                |                                                                                                  |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                             |                |                                                                                        |          | Logged By: SL                                       |                  | Method: Hand Auger    |                |                                                                                                  |
| Lat/Long:                                                                         |                | Field Screening:                                                                       |          | Hole Diameter: 2"                                   |                  | Total Depth: 5'       |                |                                                                                                  |
|                                                                                   |                | (PID) (Chloride)                                                                       |          |                                                     |                  |                       |                |                                                                                                  |
| Comments: TD @ 5'                                                                 |                |                                                                                        |          |                                                     |                  |                       |                |                                                                                                  |
| Moisture Content                                                                  | Chloride (ppm) | Vapor (ppm)                                                                            | Staining | Sample #                                            | Depth (ft. bgs.) | Sample Depth          | Soil/Rock Type | Lithology/Remarks                                                                                |
|                                                                                   |                |                                                                                        |          |                                                     | 0                |                       |                |                                                                                                  |
| 1620 M                                                                            | 21             | 0.6                                                                                    | N        | BH01                                                | 1                | 1                     | SP-Sm          | 1-3 sand, brown, no odor, no staining                                                            |
| 1625 M                                                                            | 21             | 1.0                                                                                    | N        | BH01A                                               | 2                | 2                     |                | m-f, poorly graded, true silt                                                                    |
| 1630 D                                                                            | 21             | 0.9                                                                                    | N        | BH01B                                               | 3                | 3                     |                |                                                                                                  |
| 1635 D                                                                            | 21             | 0.7                                                                                    | N        | BH01C                                               | 4                | 4                     | CL             | 3-5                                                                                              |
| 1640 D                                                                            | 21             | 0.3                                                                                    | N        | BH01D                                               | 5                | 5                     |                | clayey sand, red, brown, no odor, no stain, low cohesiveness, low plasticity, m-b, poorly graded |
|                                                                                   |                |                                                                                        |          |                                                     | 6                |                       |                | -5- calcic gravel some                                                                           |
|                                                                                   |                |                                                                                        |          |                                                     | 7                |                       |                | TD @ 5                                                                                           |
|                                                                                   |                |                                                                                        |          |                                                     | 8                |                       |                |                                                                                                  |
|                                                                                   |                |                                                                                        |          |                                                     | 9                |                       |                |                                                                                                  |
|                                                                                   |                |                                                                                        |          |                                                     | 10               |                       |                |                                                                                                  |
|                                                                                   |                |                                                                                        |          |                                                     | 11               |                       |                |                                                                                                  |
|                                                                                   |                |                                                                                        |          |                                                     | 12               |                       |                |                                                                                                  |



|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220 |                | Identifier:<br><b>PHOT</b>                                                                               | Date: <b>10.22.19</b>     |             |                  |              |                |                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------------|--------------|----------------|-------------------------------------------------------------------------|
| Project Name:<br><b>PHOT B. Sinks 25 federal Battery</b>                                                                                                                 |                | RP Number:<br><b>2RD- 4348</b>                                                                           |                           |             |                  |              |                |                                                                         |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                    |                | Logged By: <b>SL</b>                                                                                     | Method: <b>Truck hose</b> |             |                  |              |                |                                                                         |
| Lat/Long:                                                                                                                                                                |                | Field Screening:<br><input checked="" type="checkbox"/> PID <input checked="" type="checkbox"/> Chloride | Hole Diameter:            |             |                  |              |                |                                                                         |
| Total Depth: <b>5'</b>                                                                                                                                                   |                |                                                                                                          |                           |             |                  |              |                |                                                                         |
| Comments: <b>TD @ 5'</b>                                                                                                                                                 |                |                                                                                                          |                           |             |                  |              |                |                                                                         |
| Moisture Content                                                                                                                                                         | Chloride (ppm) | Vapor (ppm)                                                                                              | Staining                  | Sample #    | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks                                                       |
|                                                                                                                                                                          |                | <b>2.7</b>                                                                                               |                           |             | 0                |              |                |                                                                         |
| <b>1335</b>                                                                                                                                                              | <b>M</b>       | <b>2.7</b>                                                                                               | <b>N</b>                  | <b>PHOT</b> | 1                | 1            | <b>SP-SM</b>   | <b>1- Sand, brown, no odor, no stain, poorly graded, m-f, fine silt</b> |
| <b>1340</b>                                                                                                                                                              | <b>D</b>       | <b>2.1</b>                                                                                               | <b>N</b>                  | <b>PHOT</b> | 2                | 2            |                |                                                                         |
| <b>1345</b>                                                                                                                                                              | <b>D</b>       | <b>2.1</b>                                                                                               | <b>N</b>                  | <b>PHOT</b> | 3                | 3            |                |                                                                         |
| <b>1350</b>                                                                                                                                                              | <b>D</b>       | <b>2.1</b>                                                                                               | <b>N</b>                  | <b>PHOT</b> | 4                | 4            |                |                                                                         |
| <b>1355</b>                                                                                                                                                              | <b>D</b>       | <b>1.2</b>                                                                                               | <b>N</b>                  | <b>PHOT</b> | 5                | 5            |                | <b>- 4- increase carbonate, fine</b>                                    |
| <b>TD @ 5'</b>                                                                                                                                                           |                |                                                                                                          |                           |             |                  |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 6                |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 7                |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 8                |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 9                |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 10               |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 11               |              |                |                                                                         |
|                                                                                                                                                                          |                |                                                                                                          |                           |             | 12               |              |                |                                                                         |



|  |                | <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220 |          | Identifier:<br>PH02                               |                  | Date:<br>10.22.19      |                |                                                                                                                                              |
|-----------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------|----------|---------------------------------------------------|------------------|------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   |                |                                                                                        |          | Project Name:<br>PLU Dig Sinks 25 Federal<br>Bldg |                  | RP Number:<br>26P-4398 |                |                                                                                                                                              |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                             |                |                                                                                        |          | Logged By: SL                                     |                  | Method: Hand bore      |                |                                                                                                                                              |
| Lat/Long:                                                                         |                | Field Screening:<br>PJP Chloride                                                       |          | Hole Diameter:                                    |                  | Total Depth:<br>5'     |                |                                                                                                                                              |
| Comments: T D @ 5'                                                                |                |                                                                                        |          |                                                   |                  |                        |                |                                                                                                                                              |
| Moisture Content                                                                  | Chloride (ppm) | Vapor (ppm)                                                                            | Staining | Sample #                                          | Depth (ft. bgs.) | Sample Depth           | Soil/Rock Type | Lithology/Remarks                                                                                                                            |
|                                                                                   |                |                                                                                        |          |                                                   | 0                |                        |                | 1-3                                                                                                                                          |
| 1410                                                                              | M              | 21                                                                                     | 1.7      | N                                                 | PH02             | 1                      | 1              | Sp - Sm<br>Sand, Brown, no odor, no stain, m-f<br>poorly graded fine silt                                                                    |
| 1415                                                                              | M              | 21                                                                                     | 2.8      | N                                                 | PH02A            | 2                      | 2              |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   |                  |                        |                | 2 - red Brown sand                                                                                                                           |
| 1420                                                                              | D              | <1                                                                                     | 2.1      | N                                                 | PH02B            | 3                      | 3              | SL<br>3 - clayey sand, Red, Brown, no odor, no stain<br>m-f, poorly graded, low plasticity<br>(low cohesiveness)<br>-5- trace caliche gravel |
| 1425                                                                              | D              | <1                                                                                     | 2.9      | N                                                 | PH02C            | 4                      | 4              |                                                                                                                                              |
| 1430                                                                              | D              | <1                                                                                     | 1.2      | N                                                 | PH02D            | 5                      | 5              |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 6                |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 7                |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 8                |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 9                |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 10               |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 11               |                        |                |                                                                                                                                              |
|                                                                                   |                |                                                                                        |          |                                                   | 12               |                        |                |                                                                                                                                              |



ATTACHMENT 3: PHOTOGRAPHIC LOG



## PHOTOGRAPHIC LOG



**Photograph 1:** View of release area (2RP-2526), facing southeast.



**Photograph 2:** View of excavation (2RP-2526), facing west.



**Photograph 3:** View of excavation (2RP-2526), facing west.



**Photograph 4:** View of excavation (2RP-2526), facing northeast.



## PHOTOGRAPHIC LOG



**Photograph 5:** View of release area (2RP-4775 and 2RP-4779), facing north.



**Photograph 6:** View of release area and excavation (2RP-4775 and 2RP-4779), facing north.



**Photograph 7:** View of release area and excavation (2RP-4775 and 2RP-4779), facing west.



**Photograph 8:** View of release area and excavation (2RP-4775 and 2RP-4779), facing west.



## PHOTOGRAPHIC LOG



**Photograph 9:** View of open excavation (2RP-4398), facing east.



**Photograph 10:** View of open excavation (2RP-4398), facing north.



**Photograph 11:** View of open excavation (2RP-4398), facing west.



**Photograph 12:** View of open excavation (2RP-4398), facing northwest.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS



# Analytical Report 588895

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU Big Sinks 25 Federal Battery**

**012918093**

**20-JUN-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)





20-JUN-18

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **588895**

**PLU Big Sinks 25 Federal Battery**

Project Address: 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) 588895. 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. 588895 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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

**Sample Cross Reference 588895****LT Environmental, Inc., Arvada, CO**

PLU Big Sinks 25 Federal Battery

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS1       | S      | 06-08-18 12:30 | 6 In         | 588895-001    |
| SS2       | S      | 06-08-18 12:35 | 6 In         | 588895-002    |
| SS3       | S      | 06-08-18 12:40 | 6 In         | 588895-003    |
| SS4       | S      | 06-08-18 12:45 | 6 In         | 588895-004    |
| SS5       | S      | 06-08-18 12:50 | 6 In         | 588895-005    |
| SS6       | S      | 06-08-18 12:55 | 6 In         | 588895-006    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU Big Sinks 25 Federal Battery**

Project ID: 012918093  
Work Order Number(s): 588895

Report Date: 20-JUN-18  
Date Received: 06/12/2018

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3053754 BTEX by EPA 8021B

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





# Certificate of Analysis Summary 588895

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery



**Project Id:** 012918093  
**Contact:** Adrian Baker  
**Project Location:** NM

**Date Received in Lab:** Tue Jun-12-18 10:45 am  
**Report Date:** 20-JUN-18  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 588895-001       | 588895-002       | 588895-003       | 588895-004       | 588895-005       | 588895-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SS1              | SS2              | SS3              | SS4              | SS5              | SS6              |
|                                    | <i>Depth:</i>     | 6- In            | 6- In            | 6- In            | 6- In            | 6- In            | 6- In            |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jun-08-18 12:30  | Jun-08-18 12:35  | Jun-08-18 12:40  | Jun-08-18 12:45  | Jun-08-18 12:50  | Jun-08-18 12:55  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  |
|                                    | <i>Analyzed:</i>  | Jun-18-18 10:02  | Jun-18-18 11:51  | Jun-18-18 12:09  | Jun-18-18 12:28  | Jun-18-18 12:46  | Jun-18-18 14:00  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00199 0.00199 | 0.00306 0.00200  | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00199 0.00199 | 0.00618 0.00200  | <0.00201 0.00201 | <0.00199 0.00199 | 0.00287 0.00201  |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00398 0.00398 | 0.0387 0.00401   | <0.00402 0.00402 | <0.00398 0.00398 | 0.0191 0.00402   |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00199 0.00199 | 0.0230 0.00200   | <0.00201 0.00201 | <0.00199 0.00199 | 0.0114 0.00201   |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00199 0.00199 | 0.0617 0.00200   | <0.00201 0.00201 | <0.00199 0.00199 | 0.0305 0.00201   |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00199 0.00199 | 0.0709 0.00200   | <0.00201 0.00201 | <0.00199 0.00199 | 0.0334 0.00201   |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  |
|                                    | <i>Analyzed:</i>  | Jun-14-18 15:22  | Jun-14-18 15:43  | Jun-14-18 15:49  | Jun-14-18 16:05  | Jun-14-18 16:10  | Jun-14-18 16:16  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 18.5 5.00        | 13.3 4.98        | 75.4 5.00        | 182 4.99         | 9.63 4.96        | 94.4 5.00        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Jun-12-18 11:00  | Jun-12-18 11:00  | Jun-12-18 11:00  | Jun-15-18 18:00  | Jun-12-18 11:00  | Jun-12-18 11:00  |
|                                    | <i>Analyzed:</i>  | Jun-12-18 13:51  | Jun-12-18 14:54  | Jun-12-18 15:14  | Jun-18-18 12:03  | Jun-12-18 15:56  | Jun-12-18 16:16  |
|                                    | <i>Units/RL:</i>  | 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       | 204 15.0         | <14.9 14.9       | <15.0 15.0       | 50.4 15.0        |
| Diesel Range Organics (DRO)        |                   | 37.0 15.0        | <15.0 15.0       | 4980 15.0        | 58.1 14.9        | <15.0 15.0       | 1870 15.0        |
| Oil Range Hydrocarbons (ORO)       |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       | 21.2 15.0        |
| Total TPH                          |                   | 37.0 15.0        | <15.0 15.0       | 5180 15.0        | 58.1 14.9        | <15.0 15.0       | 1940 15.0        |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

*Jessica Kramer*

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: SS1  
Lab Sample Id: 588895-001

Matrix: Soil  
Date Collected: 06.08.18 12.30

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 18.5   | 5.00 | mg/kg | 06.14.18 15.22 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 06.12.18 13.51 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>37.0</b> | 15.0 | mg/kg | 06.12.18 13.51 |      | 1   |
| Oil Range Hydrocarbons (ORO)       | PHCG2835   | <15.0       | 15.0 | mg/kg | 06.12.18 13.51 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>37.0</b> | 15.0 | mg/kg | 06.12.18 13.51 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 80         | %     | 70-135 | 06.12.18 13.51 |      |
| o-Terphenyl    | 84-15-1    | 86         | %     | 70-135 | 06.12.18 13.51 |      |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS1  
Lab Sample Id: 588895-001

Matrix: Soil  
Date Collected: 06.08.18 12.30

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 10.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 06.18.18 10.02       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 06.18.18 10.02       |             |     |





# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: SS2 Matrix: Soil Date Received: 06.12.18 10.45  
 Lab Sample Id: 588895-002 Date Collected: 06.08.18 12.35 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: SCM % Moisture:  
 Analyst: SCM Date Prep: 06.13.18 15.00 Basis: Wet Weight  
 Seq Number: 3053525

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 13.3   | 4.98 | mg/kg | 06.14.18 15.43 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 06.12.18 11.00 Basis: Wet Weight  
 Seq Number: 3053764

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 14.54 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 14.54 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 14.54 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 14.54 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 81         | %     | 70-135 | 06.12.18 14.54 |      |
| o-Terphenyl    | 84-15-1    | 84         | %     | 70-135 | 06.12.18 14.54 |      |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS2  
Lab Sample Id: 588895-002

Matrix: Soil  
Date Collected: 06.08.18 12.35

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 11.51       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 06.18.18 11.51       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 06.18.18 11.51       |             |     |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: SS3  
Lab Sample Id: 588895-003

Matrix: Soil  
Date Collected: 06.08.18 12.40

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 75.4   | 5.00 | mg/kg | 06.14.18 15.49 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | 204    | 15.0 | mg/kg | 06.12.18 15.14 |      | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 4980   | 15.0 | mg/kg | 06.12.18 15.14 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 15.14 | U    | 1   |
| Total TPH                         | PHC635     | 5180   | 15.0 | mg/kg | 06.12.18 15.14 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 113        | %     | 70-135 | 06.12.18 15.14 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 06.12.18 15.14 |      |





# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS3  
Lab Sample Id: 588895-003

Matrix: Soil  
Date Collected: 06.08.18 12.40

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 06.18.18 12.09       | U           | 1   |
| <b>Toluene</b>       | 108-88-3          | <b>0.00306</b>    | 0.00200      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>Ethylbenzene</b>  | 100-41-4          | <b>0.00618</b>    | 0.00200      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>m,p-Xylenes</b>   | 179601-23-1       | <b>0.0387</b>     | 0.00401      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>o-Xylene</b>      | 95-47-6           | <b>0.0230</b>     | 0.00200      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>Total Xylenes</b> | 1330-20-7         | <b>0.0617</b>     | 0.00200      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>Total BTEX</b>    |                   | <b>0.0709</b>     | 0.00200      | mg/kg         | 06.18.18 12.09       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 92                | %            | 70-130        | 06.18.18 12.09       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 128               | %            | 70-130        | 06.18.18 12.09       |             |     |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS4** Matrix: Soil Date Received: 06.12.18 10.45  
 Lab Sample Id: 588895-004 Date Collected: 06.08.18 12.45 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: SCM % Moisture:  
 Analyst: SCM Date Prep: 06.13.18 15.00 Basis: Wet Weight  
 Seq Number: 3053525

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 182    | 4.99 | mg/kg | 06.14.18 16.05 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 06.15.18 18.00 Basis: Wet Weight  
 Seq Number: 3053883

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9       | 14.9 | mg/kg | 06.18.18 12.03 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>58.1</b> | 14.9 | mg/kg | 06.18.18 12.03 |      | 1   |
| Oil Range Hydrocarbons (ORO)       | PHCG2835   | <14.9       | 14.9 | mg/kg | 06.18.18 12.03 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>58.1</b> | 14.9 | mg/kg | 06.18.18 12.03 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 87         | %     | 70-135 | 06.18.18 12.03 |      |
| o-Terphenyl    | 84-15-1    | 88         | %     | 70-135 | 06.18.18 12.03 |      |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS4**  
Lab Sample Id: 588895-004

Matrix: Soil  
Date Collected: 06.08.18 12.45

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 06.18.18 12.28       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 116               | %            | 70-130        | 06.18.18 12.28       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 94                | %            | 70-130        | 06.18.18 12.28       |             |     |





# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: SS5  
 Lab Sample Id: 588895-005  
 Analytical Method: Inorganic Anions by EPA 300  
 Tech: SCM  
 Analyst: SCM  
 Seq Number: 3053525

Matrix: Soil  
 Date Collected: 06.08.18 12.50  
 Date Prep: 06.13.18 15.00

Date Received: 06.12.18 10.45  
 Sample Depth: 6 In  
 Prep Method: E300P  
 % Moisture:  
 Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 9.63   | 4.96 | mg/kg | 06.14.18 16.10 |      | 1   |

Analytical Method: TPH by SW8015 Mod  
 Tech: ARM  
 Analyst: ARM  
 Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P  
 % Moisture:  
 Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 15.56 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 15.56 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 15.56 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 15.56 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 84         | %     | 70-135 | 06.12.18 15.56 |      |
| o-Terphenyl    | 84-15-1    | 87         | %     | 70-135 | 06.12.18 15.56 |      |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS5  
Lab Sample Id: 588895-005

Matrix: Soil  
Date Collected: 06.08.18 12.50

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 12.46       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 87                | %            | 70-130        | 06.18.18 12.46       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 93                | %            | 70-130        | 06.18.18 12.46       |             |     |



# Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS6  
Lab Sample Id: 588895-006

Matrix: Soil  
Date Collected: 06.08.18 12.55

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 94.4   | 5.00 | mg/kg | 06.14.18 16.16 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | 50.4   | 15.0 | mg/kg | 06.12.18 16.16 |      | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 1870   | 15.0 | mg/kg | 06.12.18 16.16 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | 21.2   | 15.0 | mg/kg | 06.12.18 16.16 |      | 1   |
| Total TPH                         | PHC635     | 1940   | 15.0 | mg/kg | 06.12.18 16.16 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 06.12.18 16.16 |      |
| o-Terphenyl    | 84-15-1    | 129        | %     | 70-135 | 06.12.18 16.16 |      |





## Certificate of Analytical Results 588895



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS6  
Lab Sample Id: 588895-006

Matrix: Soil  
Date Collected: 06.08.18 12.55

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number  | Result     | RL      | Units | Analysis Date  | Flag           | Dil  |
|----------------------|-------------|------------|---------|-------|----------------|----------------|------|
| Benzene              | 71-43-2     | <0.00201   | 0.00201 | mg/kg | 06.18.18 14.00 | U              | 1    |
| Toluene              | 108-88-3    | <0.00201   | 0.00201 | mg/kg | 06.18.18 14.00 | U              | 1    |
| Ethylbenzene         | 100-41-4    | 0.00287    | 0.00201 | mg/kg | 06.18.18 14.00 |                | 1    |
| m,p-Xylenes          | 179601-23-1 | 0.0191     | 0.00402 | mg/kg | 06.18.18 14.00 |                | 1    |
| o-Xylene             | 95-47-6     | 0.0114     | 0.00201 | mg/kg | 06.18.18 14.00 |                | 1    |
| Total Xylenes        | 1330-20-7   | 0.0305     | 0.00201 | mg/kg | 06.18.18 14.00 |                | 1    |
| Total BTEX           |             | 0.0334     | 0.00201 | mg/kg | 06.18.18 14.00 |                | 1    |
| Surrogate            | Cas Number  | % Recovery |         | Units | Limits         | Analysis Date  | Flag |
| 4-Bromofluorobenzene | 460-00-4    | 129        |         | %     | 70-130         | 06.18.18 14.00 |      |
| 1,4-Difluorobenzene  | 540-36-3    | 95         |         | %     | 70-130         | 06.18.18 14.00 |      |



## 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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

MB Sample Id: 7656631-1-BLK

Matrix: Solid

LCS Sample Id: 7656631-1-BKS

Prep Method: E300P

Date Prep: 06.13.18

LCSD Sample Id: 7656631-1-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          | 257        | 103      | 257         | 103       | 90-110 | 0    | 20        | mg/kg | 06.14.18 13:56 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

Parent Sample Id: 588924-003

Matrix: Soil

MS Sample Id: 588924-003 S

Prep Method: E300P

Date Prep: 06.13.18

MSD Sample Id: 588924-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00         | 250          | 259       | 104     | 262        | 106      | 90-110 | 1    | 20        | mg/kg | 06.14.18 14:12 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

Parent Sample Id: 588924-004

Matrix: Soil

MS Sample Id: 588924-004 S

Prep Method: E300P

Date Prep: 06.13.18

MSD Sample Id: 588924-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00         | 250          | 264       | 106     | 260        | 104      | 90-110 | 2    | 20        | mg/kg | 06.14.18 15:32 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053764

MB Sample Id: 7656742-1-BLK

Matrix: Solid

LCS Sample Id: 7656742-1-BKS

Prep Method: TX1005P

Date Prep: 06.12.18

LCSD Sample Id: 7656742-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 903        | 90       | 880         | 88        | 70-135 | 3    | 20        | mg/kg | 06.12.18 13:10 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 949        | 95       | 922         | 92        | 70-135 | 3    | 20        | mg/kg | 06.12.18 13:10 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 90      |         | 113      |          | 110       |           | 70-135 | %     | 06.12.18 13:10 |
| o-Terphenyl    | 97      |         | 106      |          | 104       |           | 70-135 | %     | 06.12.18 13:10 |

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





**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053883

MB Sample Id: 7656922-1-BLK

Matrix: Solid

LCS Sample Id: 7656922-1-BKS

Prep Method: TX1005P

Date Prep: 06.15.18

LCSD Sample Id: 7656922-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD  | RPD Limit      | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|-------|----------------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 829        | 83       | 869         | 87        | 70-135 | 5     | 20             | mg/kg | 06.17.18 11:06 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 874        | 87       | 916         | 92        | 70-135 | 5     | 20             | mg/kg | 06.17.18 11:06 |      |
| Surrogate                         | MB %Rec   | MB Flag      | LCS %Rec   | LCS Flag | LCSD %Rec   | LCSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    | 84        |              | 118        |          | 124         |           | 70-135 | %     | 06.17.18 11:06 |       |                |      |
| o-Terphenyl                       | 89        |              | 100        |          | 105         |           | 70-135 | %     | 06.17.18 11:06 |       |                |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053764

Parent Sample Id: 588895-001

Matrix: Soil

MS Sample Id: 588895-001 S

Prep Method: TX1005P

Date Prep: 06.12.18

MSD Sample Id: 588895-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD  | RPD Limit      | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|-------|----------------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 999          | 845       | 85      | 829        | 83       | 70-135 | 2     | 20             | mg/kg | 06.12.18 14:12 |      |
| Diesel Range Organics (DRO)       | 37.0          | 999          | 844       | 81      | 842        | 81       | 70-135 | 0     | 20             | mg/kg | 06.12.18 14:12 |      |
| Surrogate                         |               |              | MS %Rec   | MS Flag | MSD %Rec   | MSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    |               |              | 101       |         | 103        |          | 70-135 | %     | 06.12.18 14:12 |       |                |      |
| o-Terphenyl                       |               |              | 90        |         | 90         |          | 70-135 | %     | 06.12.18 14:12 |       |                |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053883

Parent Sample Id: 589288-001

Matrix: Soil

MS Sample Id: 589288-001 S

Prep Method: TX1005P

Date Prep: 06.15.18

MSD Sample Id: 589288-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD  | RPD Limit      | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|-------|----------------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 998          | 810       | 81      | 811        | 81       | 70-135 | 0     | 20             | mg/kg | 06.17.18 12:07 |      |
| Diesel Range Organics (DRO)       | <15.0         | 998          | 820       | 82      | 820        | 82       | 70-135 | 0     | 20             | mg/kg | 06.17.18 12:07 |      |
| Surrogate                         |               |              | MS %Rec   | MS Flag | MSD %Rec   | MSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    |               |              | 113       |         | 113        |          | 70-135 | %     | 06.17.18 12:07 |       |                |      |
| o-Terphenyl                       |               |              | 94        |         | 90         |          | 70-135 | %     | 06.17.18 12:07 |       |                |      |

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

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

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

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

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

Seq Number: 3053754

MB Sample Id: 7656840-1-BLK

Matrix: Solid

LCS Sample Id: 7656840-1-BKS

Prep Method: SW5030B

Date Prep: 06.18.18

LCSD Sample Id: 7656840-1-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        | 0.106      | 106      | 0.0956      | 96        | 70-130 | 10   | 35        | mg/kg | 06.18.18 07:53 |      |
| Toluene      | <0.00200  | 0.100        | 0.112      | 112      | 0.0994      | 100       | 70-130 | 12   | 35        | mg/kg | 06.18.18 07:53 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.112      | 112      | 0.0982      | 99        | 70-130 | 13   | 35        | mg/kg | 06.18.18 07:53 |      |
| m,p-Xylenes  | <0.00401  | 0.200        | 0.233      | 117      | 0.206       | 104       | 70-130 | 12   | 35        | mg/kg | 06.18.18 07:53 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.110      | 110      | 0.0957      | 96        | 70-130 | 14   | 35        | mg/kg | 06.18.18 07:53 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 102      |          | 103       |           | 70-130 | %     | 06.18.18 07:53 |
| 4-Bromofluorobenzene | 86      |         | 102      |          | 96        |           | 70-130 | %     | 06.18.18 07:53 |

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

Seq Number: 3053754

Parent Sample Id: 588895-001

Matrix: Soil

MS Sample Id: 588895-001 S

Prep Method: SW5030B

Date Prep: 06.18.18

MSD Sample Id: 588895-001 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        | 0.0732    | 73      | 0.0744     | 75       | 70-130 | 2    | 35        | mg/kg | 06.18.18 08:51 |      |
| Toluene      | <0.00200      | 0.100        | 0.0767    | 77      | 0.0762     | 76       | 70-130 | 1    | 35        | mg/kg | 06.18.18 08:51 |      |
| Ethylbenzene | <0.00200      | 0.100        | 0.0763    | 76      | 0.0731     | 73       | 70-130 | 4    | 35        | mg/kg | 06.18.18 08:51 |      |
| m,p-Xylenes  | <0.00401      | 0.200        | 0.159     | 80      | 0.152      | 76       | 70-130 | 5    | 35        | mg/kg | 06.18.18 08:51 |      |
| o-Xylene     | <0.00200      | 0.100        | 0.0760    | 76      | 0.0712     | 71       | 70-130 | 7    | 35        | mg/kg | 06.18.18 08:51 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 90      |         | 109      |          | 70-130 | %     | 06.18.18 08:51 |
| 4-Bromofluorobenzene | 91      |         | 120      |          | 70-130 | %     | 06.18.18 08:51 |

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

Page 1 Of 1

San Antonio, Texas (210-509-3334)  
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

[www.xenco.com](http://www.xenco.com)

| Client / Reporting Information                                                                                       |                                |  |  |  |  | Project Information                                               |        |      |        |              |     |                                                  | Analytical Information      |       |      |        |      |                                                            |  |  | Matrix Codes |  |  |  |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------|--|--|--|--|-------------------------------------------------------------------|--------|------|--------|--------------|-----|--------------------------------------------------|-----------------------------|-------|------|--------|------|------------------------------------------------------------|--|--|--------------|--|--|--|
| Company Name / Branch:<br>Ct Environmental Inc - Premier Office<br>300 North St, Bldg 1, Unit #103 Midford, CT 06455 |                                |  |  |  |  | Project Name/Number:<br>Pitt River as Federal Battery / 012918093 |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| Company Address:                                                                                                     |                                |  |  |  |  | Project Location:                                                 |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| Email:<br>Abahe@ctenv.com                                                                                            |                                |  |  |  |  | Phone No:                                                         |        |      |        |              |     |                                                  | Invoice To:                 |       |      |        |      |                                                            |  |  |              |  |  |  |
| Project Contact:<br>Adrian Baker                                                                                     |                                |  |  |  |  | PO Number:<br>X70 Emory - Kyle Litvall<br>2 K8-TB3                |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| Sample's Name<br>Derrick Thomas                                                                                      |                                |  |  |  |  | Collection                                                        |        |      |        |              |     |                                                  | Number of preserved bottles |       |      |        |      |                                                            |  |  |              |  |  |  |
| No.                                                                                                                  | Field ID / Point of Collection |  |  |  |  | Sample Depth                                                      | Date   | Time | Matrix | # of bottles | HCl | NaOH/Zn Acetate                                  | HNO3                        | H2SO4 | NaOH | NaHSO4 | MeOH | NONE                                                       |  |  |              |  |  |  |
| 1                                                                                                                    | SS1                            |  |  |  |  | 6"                                                                | 6-8-18 | 1236 | Soil   | 1            |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 2                                                                                                                    | SS2                            |  |  |  |  |                                                                   |        | 1235 |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 3                                                                                                                    | SS3                            |  |  |  |  |                                                                   |        | 1240 |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 4                                                                                                                    | SS4                            |  |  |  |  |                                                                   |        | 1245 |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 5                                                                                                                    | SS5                            |  |  |  |  |                                                                   |        | 1250 |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 6                                                                                                                    | SS6                            |  |  |  |  |                                                                   |        | 1255 |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 7                                                                                                                    |                                |  |  |  |  |                                                                   |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 8                                                                                                                    |                                |  |  |  |  |                                                                   |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 9                                                                                                                    |                                |  |  |  |  |                                                                   |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| 10                                                                                                                   |                                |  |  |  |  |                                                                   |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| Turnaround Time (Business days)                                                                                      |                                |  |  |  |  | Data Deliverable Information                                      |        |      |        |              |     | Notes:                                           |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| <input type="checkbox"/> Same Day TAT                                                                                |                                |  |  |  |  | <input type="checkbox"/> 5 Day TAT                                |        |      |        |              |     | <input type="checkbox"/> Level II Std QC         |                             |       |      |        |      | <input type="checkbox"/> Level IV (Full Data Pkg raw data) |  |  |              |  |  |  |
| <input type="checkbox"/> Next Day EMERGENCY                                                                          |                                |  |  |  |  | <input type="checkbox"/> 7 Day TAT                                |        |      |        |              |     | <input type="checkbox"/> Level III Std QC+ Forms |                             |       |      |        |      | <input type="checkbox"/> TRRP Level IV                     |  |  |              |  |  |  |
| <input type="checkbox"/> 2 Day EMERGENCY                                                                             |                                |  |  |  |  | <input type="checkbox"/> Contract TAT                             |        |      |        |              |     | <input type="checkbox"/> Level 3 (CLP Forms)     |                             |       |      |        |      | <input type="checkbox"/> UST / RG -411                     |  |  |              |  |  |  |
| <input type="checkbox"/> 3 Day EMERGENCY                                                                             |                                |  |  |  |  | <input checked="" type="checkbox"/> Standard                      |        |      |        |              |     | <input type="checkbox"/> TRRP Checklist          |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| TAT Starts Day received by Lab, if received by 5:00 pm                                                               |                                |  |  |  |  |                                                                   |        |      |        |              |     |                                                  |                             |       |      |        |      |                                                            |  |  |              |  |  |  |
| Relinquished by Sampler:                                                                                             |                                |  |  |  |  | Date Time: 6-8-18 16:29                                           |        |      |        |              |     | Received By: [Signature]                         |                             |       |      |        |      | Date Time: 6-11-18 15:30                                   |  |  |              |  |  |  |
| Relinquished by:                                                                                                     |                                |  |  |  |  | Date Time: 6-8-18 16:29                                           |        |      |        |              |     | Received By: [Signature]                         |                             |       |      |        |      | Date Time: 6-11-18 15:30                                   |  |  |              |  |  |  |
| Relinquished by:                                                                                                     |                                |  |  |  |  | Date Time:                                                        |        |      |        |              |     | Received By:                                     |                             |       |      |        |      | Date Time:                                                 |  |  |              |  |  |  |
| On Ice                                                                                                               |                                |  |  |  |  | Cooler Temp.                                                      |        |      |        |              |     | Thermo Corr. Factor                              |                             |       |      |        |      |                                                            |  |  |              |  |  |  |

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





Client: LT Environmental, Inc.

Date/ Time Received: 06/12/2018 10:45:00 AM

Work Order #: 588895

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)?                           | 2.1 |
| #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: 06/12/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/13/2018

# Analytical Report 588898

for

**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU Big Sinks 25 Federal Battery**

**012918093**

**20-JUN-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



20-JUN-18

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **588898**

**PLU Big Sinks 25 Federal Battery**

Project Address: 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) 588898. 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. 588898 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



**Sample Cross Reference 588898****LT Environmental, Inc., Arvada, CO**

PLU Big Sinks 25 Federal Battery

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS7       | S      | 06-08-18 10:00 | 6 In         | 588898-001    |
| SS8       | S      | 06-08-18 10:05 | 6 In         | 588898-002    |
| SS9       | S      | 06-08-18 10:10 | 6 In         | 588898-003    |
| SS10      | S      | 06-08-18 10:20 | 6 In         | 588898-004    |
| SS11      | S      | 06-08-18 10:25 | 6 In         | 588898-005    |
| SS12      | S      | 06-08-18 10:30 | 6 In         | 588898-006    |
| SS13      | S      | 06-08-18 10:35 | 6 In         | 588898-007    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU Big Sinks 25 Federal Battery**

Project ID: 012918093  
Work Order Number(s): 588898

Report Date: 20-JUN-18  
Date Received: 06/12/2018

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3053859 BTEX by EPA 8021B

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

Lab Sample ID 588898-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.

Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 588898-001, -002, -003, -004, -005, -006, -007.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 588898

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

**Project Id:** 012918093  
**Contact:** Adrian Baker  
**Project Location:** NM

**Date Received in Lab:** Tue Jun-12-18 10:45 am  
**Report Date:** 20-JUN-18  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 588898-001       | 588898-002       | 588898-003       | 588898-004       | 588898-005       | 588898-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SS7              | SS8              | SS9              | SS10             | SS11             | SS12             |
|                                    | <i>Depth:</i>     | 6- In            | 6- In            | 6- In            | 6- In            | 6- In            | 6- In            |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jun-08-18 10:00  | Jun-08-18 10:05  | Jun-08-18 10:10  | Jun-08-18 10:20  | Jun-08-18 10:25  | Jun-08-18 10:30  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Jun-18-18 15:30  | Jun-18-18 15:30  | Jun-18-18 15:30  | Jun-18-18 15:30  | Jun-18-18 15:30  | Jun-18-18 15:30  |
|                                    | <i>Analyzed:</i>  | Jun-18-18 21:12  | Jun-18-18 21:30  | Jun-18-18 21:49  | Jun-18-18 23:55  | Jun-19-18 00:14  | Jun-19-18 00:30  |
|                                    | <i>Units/RL:</i>  | 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 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Toluene                            |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| m,p-Xylenes                        |                   | <0.00399 0.00399 | <0.00402 0.00402 | <0.00402 0.00402 | <0.00398 0.00398 | <0.00398 0.00398 | <0.00402 0.00402 |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Jun-14-18 08:30  | Jun-14-18 08:30  | Jun-14-18 08:30  | Jun-14-18 08:30  | Jun-15-18 08:00  | Jun-15-18 08:00  |
|                                    | <i>Analyzed:</i>  | Jun-14-18 17:24  | Jun-14-18 17:46  | Jun-14-18 17:29  | Jun-14-18 17:41  | Jun-15-18 11:04  | Jun-15-18 10:47  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 2390 24.8        | 321 5.00         | 1580 25.0        | 2390 24.6        | 133 4.93         | 93.4 5.00        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Jun-15-18 12:00  | Jun-15-18 12:00  | Jun-15-18 12:00  | Jun-15-18 12:00  | Jun-15-18 12:00  | Jun-15-18 12:00  |
|                                    | <i>Analyzed:</i>  | Jun-15-18 15:47  | Jun-15-18 16:07  | Jun-15-18 16:27  | Jun-15-18 16:47  | Jun-15-18 17:08  | Jun-15-18 17:28  |
|                                    | <i>Units/RL:</i>  | mg/kg 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       | <15.0 15.0       |
| Diesel Range Organics (DRO)        |                   | <14.9 14.9       | <15.0 15.0       | <15.0 15.0       | 18.0 15.0        | 19.0 15.0        | <15.0 15.0       |
| Oil Range Hydrocarbons (ORO)       |                   | <14.9 14.9       | <15.0 15.0       | <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       | 18.0 15.0        | 19.0 15.0        | <15.0 15.0       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant





## Certificate of Analysis Summary 588898

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 012918093  
 Contact: Adrian Baker  
 Project Location: NM

Date Received in Lab: Tue Jun-12-18 10:45 am  
 Report Date: 20-JUN-18  
 Project Manager: Jessica Kramer

|                                    |                   |                  |  |  |  |  |  |
|------------------------------------|-------------------|------------------|--|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 588898-007       |  |  |  |  |  |
|                                    | <b>Field Id:</b>  | SS13             |  |  |  |  |  |
|                                    | <b>Depth:</b>     | 6- In            |  |  |  |  |  |
|                                    | <b>Matrix:</b>    | SOIL             |  |  |  |  |  |
|                                    | <b>Sampled:</b>   | Jun-08-18 10:35  |  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Jun-18-18 15:30  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jun-19-18 00:48  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Benzene                            |                   | <0.00202 0.00202 |  |  |  |  |  |
| Toluene                            |                   | <0.00202 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                         |                   | <0.00202 0.00202 |  |  |  |  |  |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b> | Jun-15-18 08:00  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jun-15-18 11:09  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Chloride                           |                   | 4240 49.9        |  |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Jun-15-18 12:00  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Jun-15-18 17:48  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       |  |  |  |  |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       |  |  |  |  |  |
| Oil Range Hydrocarbons (ORO)       |                   | <15.0 15.0       |  |  |  |  |  |
| Total TPH                          |                   | <15.0 15.0       |  |  |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
 Project Assistant



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: SS7  
Lab Sample Id: 588898-001

Matrix: Soil  
Date Collected: 06.08.18 10.00

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053433

Date Prep: 06.14.18 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2390   | 24.8 | mg/kg | 06.14.18 17.24 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053586

Date Prep: 06.15.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <14.9  | 14.9 | mg/kg | 06.15.18 15.47 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <14.9  | 14.9 | mg/kg | 06.15.18 15.47 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <14.9  | 14.9 | mg/kg | 06.15.18 15.47 | U    | 1   |
| Total TPH                         | PHC635     | <14.9  | 14.9 | mg/kg | 06.15.18 15.47 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 72         | %     | 70-135 | 06.15.18 15.47 |      |
| o-Terphenyl    | 84-15-1    | 76         | %     | 70-135 | 06.15.18 15.47 |      |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS7  
Lab Sample Id: 588898-001

Matrix: Soil  
Date Collected: 06.08.18 10.00

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 06.18.18 21.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 06.18.18 21.12       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 06.18.18 21.12       |             |     |





# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS8** Matrix: **Soil** Date Received: 06.12.18 10.45  
 Lab Sample Id: 588898-002 Date Collected: 06.08.18 10.05 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: **SCM** % Moisture:  
 Analyst: **SCM** Date Prep: 06.14.18 08.30 Basis: **Wet Weight**  
 Seq Number: 3053433

| Parameter       | Cas Number | Result     | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------|------------|------------|------|-------|----------------|------|-----|
| <b>Chloride</b> | 16887-00-6 | <b>321</b> | 5.00 | mg/kg | 06.14.18 17.46 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: **ARM** % Moisture:  
 Analyst: **ARM** Date Prep: 06.15.18 12.00 Basis: **Wet Weight**  
 Seq Number: 3053586

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.15.18 16.07 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.15.18 16.07 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.15.18 16.07 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.15.18 16.07 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 77         | %     | 70-135 | 06.15.18 16.07 |      |
| o-Terphenyl    | 84-15-1    | 79         | %     | 70-135 | 06.15.18 16.07 |      |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS8**  
Lab Sample Id: 588898-002

Matrix: Soil  
Date Collected: 06.08.18 10.05

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.30       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 06.18.18 21.30       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 06.18.18 21.30       |             |     |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS9** Matrix: **Soil** Date Received: 06.12.18 10.45  
 Lab Sample Id: 588898-003 Date Collected: 06.08.18 10.10 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: **SCM** % Moisture:  
 Analyst: **SCM** Date Prep: 06.14.18 08.30 Basis: **Wet Weight**  
 Seq Number: 3053433

| Parameter       | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------|------------|-------------|------|-------|----------------|------|-----|
| <b>Chloride</b> | 16887-00-6 | <b>1580</b> | 25.0 | mg/kg | 06.14.18 17.29 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: **ARM** % Moisture:  
 Analyst: **ARM** Date Prep: 06.15.18 12.00 Basis: **Wet Weight**  
 Seq Number: 3053586

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.15.18 16.27 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.15.18 16.27 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.15.18 16.27 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.15.18 16.27 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 75         | %     | 70-135 | 06.15.18 16.27 |      |
| o-Terphenyl    | 84-15-1    | 77         | %     | 70-135 | 06.15.18 16.27 |      |





# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SS9  
Lab Sample Id: 588898-003

Matrix: Soil  
Date Collected: 06.08.18 10.10

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 06.18.18 21.49       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 91                | %            | 70-130        | 06.18.18 21.49       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 89                | %            | 70-130        | 06.18.18 21.49       |             |     |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS10**  
Lab Sample Id: 588898-004

Matrix: Soil  
Date Collected: 06.08.18 10.20

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053433

Date Prep: 06.14.18 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2390   | 24.6 | mg/kg | 06.14.18 17.41 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053586

Date Prep: 06.15.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 06.15.18 16.47 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>18.0</b> | 15.0 | mg/kg | 06.15.18 16.47 |      | 1   |
| Oil Range Hydrocarbons (ORO)       | PHCG2835   | <15.0       | 15.0 | mg/kg | 06.15.18 16.47 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>18.0</b> | 15.0 | mg/kg | 06.15.18 16.47 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 90         | %     | 70-135 | 06.15.18 16.47 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 06.15.18 16.47 |      |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS10**  
Lab Sample Id: 588898-004

Matrix: Soil  
Date Collected: 06.08.18 10.20

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 23.55       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 06.18.18 23.55       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 92                | %            | 70-130        | 06.18.18 23.55       |             |     |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS11** Matrix: Soil Date Received: 06.12.18 10.45  
 Lab Sample Id: 588898-005 Date Collected: 06.08.18 10.25 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: SCM % Moisture:  
 Analyst: SCM Date Prep: 06.15.18 08.00 Basis: Wet Weight  
 Seq Number: 3053704

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 133    | 4.93 | mg/kg | 06.15.18 11.04 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 06.15.18 12.00 Basis: Wet Weight  
 Seq Number: 3053586

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 06.15.18 17.08 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>19.0</b> | 15.0 | mg/kg | 06.15.18 17.08 |      | 1   |
| Oil Range Hydrocarbons (ORO)       | PHCG2835   | <15.0       | 15.0 | mg/kg | 06.15.18 17.08 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>19.0</b> | 15.0 | mg/kg | 06.15.18 17.08 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 78         | %     | 70-135 | 06.15.18 17.08 |      |
| o-Terphenyl    | 84-15-1    | 80         | %     | 70-135 | 06.15.18 17.08 |      |





# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS11**  
Lab Sample Id: 588898-005

Matrix: Soil  
Date Collected: 06.08.18 10.25

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.19.18 00.14       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 92                | %            | 70-130        | 06.19.18 00.14       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 94                | %            | 70-130        | 06.19.18 00.14       |             |     |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS12**  
Lab Sample Id: 588898-006

Matrix: Soil  
Date Collected: 06.08.18 10.30

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053704

Date Prep: 06.15.18 08.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 93.4   | 5.00 | mg/kg | 06.15.18 10.47 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053586

Date Prep: 06.15.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.15.18 17.28 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.15.18 17.28 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.15.18 17.28 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.15.18 17.28 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 77         | %     | 70-135 | 06.15.18 17.28 |      |
| o-Terphenyl    | 84-15-1    | 81         | %     | 70-135 | 06.15.18 17.28 |      |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS12**  
Lab Sample Id: 588898-006

Matrix: Soil  
Date Collected: 06.08.18 10.30

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 06.19.18 00.30       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 86                | %            | 70-130        | 06.19.18 00.30       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 06.19.18 00.30       |             |     |



# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS13**  
Lab Sample Id: 588898-007

Matrix: Soil  
Date Collected: 06.08.18 10.35

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053704

Date Prep: 06.15.18 08.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 4240   | 49.9 | mg/kg | 06.15.18 11.09 |      | 10  |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053586

Date Prep: 06.15.18 12.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.15.18 17.48 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.15.18 17.48 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.15.18 17.48 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.15.18 17.48 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 78         | %     | 70-135 | 06.15.18 17.48 |      |
| o-Terphenyl    | 84-15-1    | 80         | %     | 70-135 | 06.15.18 17.48 |      |





# Certificate of Analytical Results 588898



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS13**  
Lab Sample Id: 588898-007

Matrix: Soil  
Date Collected: 06.08.18 10.35

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 15.30

Basis: Wet Weight

Seq Number: 3053859

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 06.19.18 00.48       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 06.19.18 00.48       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 06.19.18 00.48       |             |     |



## 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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053433

MB Sample Id: 7656636-1-BLK

Matrix: Solid

LCS Sample Id: 7656636-1-BKS

Prep Method: E300P

Date Prep: 06.14.18

LCSD Sample Id: 7656636-1-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          | 257        | 103      | 257         | 103       | 90-110 | 0    | 20        | mg/kg | 06.14.18 12:29 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053704

MB Sample Id: 7656726-1-BLK

Matrix: Solid

LCS Sample Id: 7656726-1-BKS

Prep Method: E300P

Date Prep: 06.15.18

LCSD Sample Id: 7656726-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00     | 250          | 252        | 101      | 251         | 100       | 90-110 | 0    | 20        | mg/kg | 06.15.18 09:21 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053433

Parent Sample Id: 588898-002

Matrix: Soil

MS Sample Id: 588898-002 S

Prep Method: E300P

Date Prep: 06.14.18

MSD Sample Id: 588898-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 321           | 250          | 558       | 95      | 559        | 95       | 90-110 | 0    | 20        | mg/kg | 06.14.18 17:57 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053433

Parent Sample Id: 589043-001

Matrix: Soil

MS Sample Id: 589043-001 S

Prep Method: E300P

Date Prep: 06.14.18

MSD Sample Id: 589043-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 7.35          | 247          | 270       | 106     | 264        | 104      | 90-110 | 2    | 20        | mg/kg | 06.14.18 12:46 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053704

Parent Sample Id: 588898-006

Matrix: Soil

MS Sample Id: 588898-006 S

Prep Method: E300P

Date Prep: 06.15.18

MSD Sample Id: 588898-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 93.4          | 250          | 336       | 97      | 336        | 97       | 90-110 | 0    | 20        | mg/kg | 06.15.18 10:53 |      |

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053704

Parent Sample Id: 589317-001

Matrix: Soil

MS Sample Id: 589317-001 S

Prep Method: E300P

Date Prep: 06.15.18

MSD Sample Id: 589317-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 6.86          | 250          | 254       | 99      | 254        | 99       | 90-110 | 0    | 20        | mg/kg | 06.15.18 09:37 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053586

MB Sample Id: 7656745-1-BLK

Matrix: Solid

LCS Sample Id: 7656745-1-BKS

Prep Method: TX1005P

Date Prep: 06.15.18

LCSD Sample Id: 7656745-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 837        | 84       | 847         | 85        | 70-135 | 1    | 20        | mg/kg | 06.15.18 13:26 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 827        | 83       | 854         | 85        | 70-135 | 3    | 20        | mg/kg | 06.15.18 13:26 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 80      |         | 107      |          | 109       |           | 70-135 | %     | 06.15.18 13:26 |
| o-Terphenyl    | 84      |         | 86       |          | 83        |           | 70-135 | %     | 06.15.18 13:26 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053586

Parent Sample Id: 589277-001

Matrix: Soil

MS Sample Id: 589277-001 S

Prep Method: TX1005P

Date Prep: 06.15.18

MSD Sample Id: 589277-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 999          | 820       | 82      | 871        | 87       | 70-135 | 6    | 20        | mg/kg | 06.15.18 14:26 |      |
| Diesel Range Organics (DRO)       | 331           | 999          | 1120      | 79      | 1160       | 83       | 70-135 | 4    | 20        | mg/kg | 06.15.18 14:26 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 109     |         | 102      |          | 70-135 | %     | 06.15.18 14:26 |
| o-Terphenyl    | 89      |         | 90       |          | 70-135 | %     | 06.15.18 14:26 |

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





**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

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

Seq Number: 3053859

MB Sample Id: 7656905-1-BLK

Matrix: Solid

LCS Sample Id: 7656905-1-BKS

Prep Method: SW5030B

Date Prep: 06.18.18

LCSD Sample Id: 7656905-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00202  | 0.101        | 0.101      | 100      | 0.0966      | 97        | 70-130 | 4    | 35        | mg/kg | 06.18.18 17:54 |      |
| Toluene      | <0.00202  | 0.101        | 0.105      | 104      | 0.103       | 103       | 70-130 | 2    | 35        | mg/kg | 06.18.18 17:54 |      |
| Ethylbenzene | <0.00202  | 0.101        | 0.105      | 104      | 0.103       | 103       | 70-130 | 2    | 35        | mg/kg | 06.18.18 17:54 |      |
| m,p-Xylenes  | <0.00403  | 0.202        | 0.219      | 108      | 0.216       | 108       | 70-130 | 1    | 35        | mg/kg | 06.18.18 17:54 |      |
| o-Xylene     | <0.00202  | 0.101        | 0.106      | 105      | 0.100       | 100       | 70-130 | 6    | 35        | mg/kg | 06.18.18 17:54 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 85      |         | 95       |          | 107       |           | 70-130 | %     | 06.18.18 17:54 |
| 4-Bromofluorobenzene | 88      |         | 106      |          | 97        |           | 70-130 | %     | 06.18.18 17:54 |

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

Seq Number: 3053859

Parent Sample Id: 588898-001

Matrix: Soil

MS Sample Id: 588898-001 S

Prep Method: SW5030B

Date Prep: 06.18.18

MSD Sample Id: 588898-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00199      | 0.0996       | 0.0648    | 65      | 0.0715     | 72       | 70-130 | 10   | 35        | mg/kg | 06.18.18 18:31 | X    |
| Toluene      | <0.00199      | 0.0996       | 0.0647    | 65      | 0.0731     | 73       | 70-130 | 12   | 35        | mg/kg | 06.18.18 18:31 | X    |
| Ethylbenzene | <0.00199      | 0.0996       | 0.0626    | 63      | 0.0710     | 71       | 70-130 | 13   | 35        | mg/kg | 06.18.18 18:31 | X    |
| m,p-Xylenes  | <0.00398      | 0.199        | 0.132     | 66      | 0.146      | 73       | 70-130 | 10   | 35        | mg/kg | 06.18.18 18:31 | X    |
| o-Xylene     | <0.00199      | 0.0996       | 0.0611    | 61      | 0.0702     | 70       | 70-130 | 14   | 35        | mg/kg | 06.18.18 18:31 | X    |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 97      |         | 107      |          | 70-130 | %     | 06.18.18 18:31 |
| 4-Bromofluorobenzene | 105     |         | 110      |          | 70-130 | %     | 06.18.18 18:31 |

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

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

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

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

# CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)  
 Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

| Client / Reporting Information                                                                                                                                                 |                                |              |                       | Project Information                                                     |               |                       |                          | Xenco Quote # |       | Xenco Job # |        | Matrix Codes |      |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------|-----------------------|-------------------------------------------------------------------------|---------------|-----------------------|--------------------------|---------------|-------|-------------|--------|--------------|------|----------------|
| Company Name / Branch: <u>LT Environmental, Inc - Permian Office</u>                                                                                                           |                                |              |                       | Project Name/Number: <u>PLU RIA Sinks 25 Federal R. Hwy / 012918093</u> |               |                       |                          | Xenco Quote # |       | Xenco Job # |        | Matrix Codes |      |                |
| Company Address: <u>3300 North 14th St, Box 1, Unit 103, Midland, TX 79705</u>                                                                                                 |                                |              |                       | Project Location: <u>NM</u>                                             |               |                       |                          |               |       |             |        |              |      |                |
| Email: <u>Abaker@ltenv.com</u> Phone No: <u>432-704-5118</u>                                                                                                                   |                                |              |                       | Invoice To: <u>XTO Energy - Kyle Litchell</u>                           |               |                       |                          |               |       |             |        |              |      |                |
| Project Contact: <u>Adrian Baker</u>                                                                                                                                           |                                |              |                       | PO Number: <u>280-2526</u>                                              |               |                       |                          |               |       |             |        |              |      |                |
| Sampler's Name: <u>Brent Thomas</u>                                                                                                                                            |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| No.                                                                                                                                                                            | Field ID / Point of Collection | Sample Depth | Collection Date       | Time                                                                    | Matrix        | # of bottles          | NaOH/Zn Acetate          | HNO3          | H2SO4 | NaOH        | NaHSO4 | MEOH         | NONE | Field Comments |
| 1                                                                                                                                                                              |                                | 6"           | 6-8-18                | 1000                                                                    | Soil          | 1                     |                          |               |       |             |        |              |      |                |
| 2                                                                                                                                                                              |                                | SS8          |                       | 1005                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 3                                                                                                                                                                              |                                | SS9          |                       | 1010                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 4                                                                                                                                                                              |                                | SS16         |                       | 1020                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 5                                                                                                                                                                              |                                | SS11         |                       | 1025                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 6                                                                                                                                                                              |                                | SS12         |                       | 1030                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 7                                                                                                                                                                              |                                | SS13         |                       | 1035                                                                    |               |                       |                          |               |       |             |        |              |      |                |
| 8                                                                                                                                                                              |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| 9                                                                                                                                                                              |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| 10                                                                                                                                                                             |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| Turnaround Time (Business days)                                                                                                                                                |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      | Notes:         |
| <input type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT <input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg / raw data) |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV         |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411             |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> TRRP Checklist                                                                                               |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| TAT Starts Day received by Lab, if received by 5:00 pm                                                                                                                         |                                |              |                       |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| 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:          | FED-EX / UPS: Tracking # |               |       |             |        |              |      |                |
| 1 <u>Adrian Baker</u>                                                                                                                                                          |                                | 6-8-18 16:29 | 1 <u>Adrian Baker</u> | 2 <u>Camille Wells</u>                                                  | 6-11-18 15:30 | 2 <u>Adrian Baker</u> |                          |               |       |             |        |              |      |                |
| Relinquished by:                                                                                                                                                               |                                | Date Time:   | Received By:          | Relinquished By:                                                        | Date Time:    | Received By:          |                          |               |       |             |        |              |      |                |
| 3                                                                                                                                                                              |                                |              | 3                     |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| Relinquished by:                                                                                                                                                               |                                | Date Time:   | Received By:          | Relinquished By:                                                        | Date Time:    | Received By:          |                          |               |       |             |        |              |      |                |
| 5                                                                                                                                                                              |                                |              | 5                     |                                                                         |               |                       |                          |               |       |             |        |              |      |                |
| Relinquished by:                                                                                                                                                               |                                | Date Time:   | Received By:          | Relinquished By:                                                        | Date Time:    | Received By:          |                          |               |       |             |        |              |      |                |
| 5                                                                                                                                                                              |                                |              | 5                     |                                                                         |               |                       |                          |               |       |             |        |              |      |                |

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



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/12/2018 10:45:00 AM

Work Order #: 588898

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)?                           | 2.1 |
| #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: 06/12/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/12/2018

# Analytical Report 588896

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**  
**PLU Big Sinks 25 Federal Battery**

**012918093**

**20-JUN-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)  
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)  
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-17-3)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429)  
Xenco-Lakeland: Florida (E84098)





20-JUN-18

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **588896**

**PLU Big Sinks 25 Federal Battery**

Project Address: 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) 588896. 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. 588896 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 588896

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS14      | S      | 06-08-18 10:40 | 6 In         | 588896-001    |
| SS15      | S      | 06-08-18 10:45 | 6 In         | 588896-002    |
| SS16      | S      | 06-08-18 10:50 | 6 In         | 588896-003    |
| SS17      | S      | 06-08-18 10:55 | 6 In         | 588896-004    |



## CASE NARRATIVE

**Client Name:** LT Environmental, Inc.

**Project Name:** PLU Big Sinks 25 Federal Battery

Project ID: 012918093

Work Order Number(s): 588896

Report Date: 20-JUN-18

Date Received: 06/12/2018

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3053754 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 588896

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

**Project Id:** 012918093  
**Contact:** Adrian Baker  
**Project Location:** NM

**Date Received in Lab:** Tue Jun-12-18 10:45 am  
**Report Date:** 20-JUN-18  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 588896-001       | 588896-002       | 588896-003       | 588896-004       |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|--|--|
|                                    | <i>Field Id:</i>  | SS14             | SS15             | SS16             | SS17             |  |  |
|                                    | <i>Depth:</i>     | 6- In            | 6- In            | 6- In            | 6- In            |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             |  |  |
|                                    | <i>Sampled:</i>   | Jun-08-18 10:40  | Jun-08-18 10:45  | Jun-08-18 10:50  | Jun-08-18 10:55  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  | Jun-18-18 08:00  |  |  |
|                                    | <i>Analyzed:</i>  | Jun-18-18 14:18  | Jun-18-18 14:37  | Jun-18-18 14:55  | Jun-18-18 15:13  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Benzene                            |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| Toluene                            |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| Ethylbenzene                       |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| m,p-Xylenes                        |                   | <0.00404 0.00404 | <0.00401 0.00401 | <0.00398 0.00398 | <0.00398 0.00398 |  |  |
| o-Xylene                           |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| Total Xylenes                      |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| Total BTEX                         |                   | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |  |  |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  | Jun-13-18 15:00  |  |  |
|                                    | <i>Analyzed:</i>  | Jun-14-18 16:21  | Jun-14-18 16:26  | Jun-14-18 16:32  | Jun-14-18 16:37  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Chloride                           |                   | 3570 25.0        | 7780 49.3        | 7250 49.8        | 6250 49.6        |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Jun-12-18 11:00  | Jun-12-18 11:00  | Jun-12-18 11:00  | Jun-12-18 11:00  |  |  |
|                                    | <i>Analyzed:</i>  | Jun-12-18 16:37  | Jun-12-18 16:58  | Jun-12-18 17:18  | Jun-12-18 17:39  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Oil Range Hydrocarbons (ORO)       |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant





# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS14**  
Lab Sample Id: 588896-001

Matrix: Soil  
Date Collected: 06.08.18 10.40

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 3570   | 25.0 | mg/kg | 06.14.18 16.21 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 16.37 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 16.37 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 16.37 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 16.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 88         | %     | 70-135 | 06.12.18 16.37 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 06.12.18 16.37 |      |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS14**  
Lab Sample Id: 588896-001

Matrix: Soil  
Date Collected: 06.08.18 10.40

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 06.18.18 14.18       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 119               | %            | 70-130        | 06.18.18 14.18       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 92                | %            | 70-130        | 06.18.18 14.18       |             |     |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS15**  
Lab Sample Id: 588896-002

Matrix: Soil  
Date Collected: 06.08.18 10.45

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 7780   | 49.3 | mg/kg | 06.14.18 16.26 |      | 10  |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 16.58 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 16.58 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 16.58 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 16.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 86         | %     | 70-135 | 06.12.18 16.58 |      |
| o-Terphenyl    | 84-15-1    | 89         | %     | 70-135 | 06.12.18 16.58 |      |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS15**  
Lab Sample Id: 588896-002

Matrix: Soil  
Date Collected: 06.08.18 10.45

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 06.18.18 14.37       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 92                | %            | 70-130        | 06.18.18 14.37       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 122               | %            | 70-130        | 06.18.18 14.37       |             |     |





# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS16** Matrix: Soil Date Received: 06.12.18 10.45  
 Lab Sample Id: 588896-003 Date Collected: 06.08.18 10.50 Sample Depth: 6 In  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: SCM % Moisture:  
 Analyst: SCM Date Prep: 06.13.18 15.00 Basis: Wet Weight  
 Seq Number: 3053525

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 7250   | 49.8 | mg/kg | 06.14.18 16.32 |      | 10  |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 06.12.18 11.00 Basis: Wet Weight  
 Seq Number: 3053764

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 17.18 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 17.18 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 17.18 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 17.18 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 88         | %     | 70-135 | 06.12.18 17.18 |      |
| o-Terphenyl    | 84-15-1    | 92         | %     | 70-135 | 06.12.18 17.18 |      |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS16**  
Lab Sample Id: 588896-003

Matrix: Soil  
Date Collected: 06.08.18 10.50

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 14.55       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 91                | %            | 70-130        | 06.18.18 14.55       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 06.18.18 14.55       |             |     |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SS17**  
Lab Sample Id: 588896-004

Matrix: Soil  
Date Collected: 06.08.18 10.55

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3053525

Date Prep: 06.13.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 6250   | 49.6 | mg/kg | 06.14.18 16.37 |      | 10  |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3053764

Date Prep: 06.12.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0  | 15.0 | mg/kg | 06.12.18 17.39 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <15.0  | 15.0 | mg/kg | 06.12.18 17.39 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0  | 15.0 | mg/kg | 06.12.18 17.39 | U    | 1   |
| Total TPH                         | PHC635     | <15.0  | 15.0 | mg/kg | 06.12.18 17.39 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 87         | %     | 70-135 | 06.12.18 17.39 |      |
| o-Terphenyl    | 84-15-1    | 89         | %     | 70-135 | 06.12.18 17.39 |      |



# Certificate of Analytical Results 588896



## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SS17**  
Lab Sample Id: 588896-004

Matrix: Soil  
Date Collected: 06.08.18 10.55

Date Received: 06.12.18 10.45  
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.18.18 08.00

Basis: Wet Weight

Seq Number: 3053754

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 06.18.18 15.13       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 06.18.18 15.13       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 91                | %            | 70-130        | 06.18.18 15.13       |             |     |





## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

MB Sample Id: 7656631-1-BLK

Matrix: Solid

LCS Sample Id: 7656631-1-BKS

Prep Method: E300P

Date Prep: 06.13.18

LCSD Sample Id: 7656631-1-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          | 257        | 103      | 257         | 103       | 90-110 | 0    | 20        | mg/kg | 06.14.18 13:56 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

Parent Sample Id: 588924-003

Matrix: Soil

MS Sample Id: 588924-003 S

Prep Method: E300P

Date Prep: 06.13.18

MSD Sample Id: 588924-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00         | 250          | 259       | 104     | 262        | 106      | 90-110 | 1    | 20        | mg/kg | 06.14.18 14:12 |      |

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number: 3053525

Parent Sample Id: 588924-004

Matrix: Soil

MS Sample Id: 588924-004 S

Prep Method: E300P

Date Prep: 06.13.18

MSD Sample Id: 588924-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00         | 250          | 264       | 106     | 260        | 104      | 90-110 | 2    | 20        | mg/kg | 06.14.18 15:32 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053764

MB Sample Id: 7656742-1-BLK

Matrix: Solid

LCS Sample Id: 7656742-1-BKS

Prep Method: TX1005P

Date Prep: 06.12.18

LCSD Sample Id: 7656742-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 903        | 90       | 880         | 88        | 70-135 | 3    | 20        | mg/kg | 06.12.18 13:10 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 949        | 95       | 922         | 92        | 70-135 | 3    | 20        | mg/kg | 06.12.18 13:10 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 90      |         | 113      |          | 110       |           | 70-135 | %     | 06.12.18 13:10 |
| o-Terphenyl    | 97      |         | 106      |          | 104       |           | 70-135 | %     | 06.12.18 13:10 |

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3053764

Parent Sample Id: 588895-001

Matrix: Soil

MS Sample Id: 588895-001 S

Prep Method: TX1005P

Date Prep: 06.12.18

MSD Sample Id: 588895-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 999          | 845       | 85      | 829        | 83       | 70-135 | 2    | 20        | mg/kg | 06.12.18 14:12 |      |
| Diesel Range Organics (DRO)       | 37.0          | 999          | 844       | 81      | 842        | 81       | 70-135 | 0    | 20        | mg/kg | 06.12.18 14:12 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 101     |         | 103      |          | 70-135 | %     | 06.12.18 14:12 |
| o-Terphenyl    | 90      |         | 90       |          | 70-135 | %     | 06.12.18 14:12 |

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

Seq Number: 3053754

MB Sample Id: 7656840-1-BLK

Matrix: Solid

LCS Sample Id: 7656840-1-BKS

Prep Method: SW5030B

Date Prep: 06.18.18

LCSD Sample Id: 7656840-1-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        | 0.106      | 106      | 0.0956      | 96        | 70-130 | 10   | 35        | mg/kg | 06.18.18 07:53 |      |
| Toluene      | <0.00200  | 0.100        | 0.112      | 112      | 0.0994      | 100       | 70-130 | 12   | 35        | mg/kg | 06.18.18 07:53 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.112      | 112      | 0.0982      | 99        | 70-130 | 13   | 35        | mg/kg | 06.18.18 07:53 |      |
| m,p-Xylenes  | <0.00401  | 0.200        | 0.233      | 117      | 0.206       | 104       | 70-130 | 12   | 35        | mg/kg | 06.18.18 07:53 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.110      | 110      | 0.0957      | 96        | 70-130 | 14   | 35        | mg/kg | 06.18.18 07:53 |      |

**Surrogate**

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 102      |          | 103       |           | 70-130 | %     | 06.18.18 07:53 |
| 4-Bromofluorobenzene | 86      |         | 102      |          | 96        |           | 70-130 | %     | 06.18.18 07:53 |

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

Seq Number: 3053754

Parent Sample Id: 588895-001

Matrix: Soil

MS Sample Id: 588895-001 S

Prep Method: SW5030B

Date Prep: 06.18.18

MSD Sample Id: 588895-001 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        | 0.0732    | 73      | 0.0744     | 75       | 70-130 | 2    | 35        | mg/kg | 06.18.18 08:51 |      |
| Toluene      | <0.00200      | 0.100        | 0.0767    | 77      | 0.0762     | 76       | 70-130 | 1    | 35        | mg/kg | 06.18.18 08:51 |      |
| Ethylbenzene | <0.00200      | 0.100        | 0.0763    | 76      | 0.0731     | 73       | 70-130 | 4    | 35        | mg/kg | 06.18.18 08:51 |      |
| m,p-Xylenes  | <0.00401      | 0.200        | 0.159     | 80      | 0.152      | 76       | 70-130 | 5    | 35        | mg/kg | 06.18.18 08:51 |      |
| o-Xylene     | <0.00200      | 0.100        | 0.0760    | 76      | 0.0712     | 71       | 70-130 | 7    | 35        | mg/kg | 06.18.18 08:51 |      |

**Surrogate**

|                      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 90      |         | 109      |          | 70-130 | %     | 06.18.18 08:51 |
| 4-Bromofluorobenzene | 91      |         | 120      |          | 70-130 | %     | 06.18.18 08:51 |

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



*Setting the Standard since 1990*  
Stafford, Texas (281-240-4200)  
Dallas Texas (214-902-0300)

# CHAIN OF CUSTODY

Page 1 Of 1

San Antonio, Texas (210-509-3334)  
Midland, Texas (432-704-5251)

**Phoenix, Arizona (480-355-0900)**

[www.xenco.com](http://www.xenco.com)

[illegible]





Client: LT Environmental, Inc.

Date/ Time Received: 06/12/2018 10:45:00 AM

Work Order #: 588896

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)?                           | 2.1 |
| #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: 06/12/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/13/2018

# Analytical Report 614582

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #5H**

**2RP-4779, 2RP-4775**

**20-FEB-19**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



20-FEB-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **614582**

**PLU CVX JV #5H**

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) 614582. 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. 614582 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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

**Sample Cross Reference 614582****LT Environmental, Inc., Arvada, CO**

PLU CVX JV #5H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS1A      | S      | 02-08-19 16:05 | 2 ft         | 614582-001    |
| PH01      | S      | 02-08-19 16:15 | 0.5 ft       | 614582-002    |
| PH01A     | S      | 02-08-19 16:20 | 2 ft         | 614582-003    |
| PH02      | S      | 02-08-19 16:35 | 0.5 ft       | 614582-004    |
| PH02A     | S      | 02-08-19 16:45 | 2 ft         | 614582-005    |
| SS6A      | S      | 02-08-19 16:50 | 2 ft         | 614582-006    |





## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #5H**

Project ID: 2RP-4779, 2RP-4775  
Work Order Number(s): 614582

Report Date: 20-FEB-19  
Date Received: 02/14/2019

---

**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3079752 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 614582

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #5H

**Project Id:** 2RP-4779, 2RP-4775  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Thu Feb-14-19 11:52 am  
**Report Date:** 20-FEB-19  
**Project Manager:** Jessica Kramer

| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 614582-001       | 614582-002       | 614582-003       | 614582-004       | 614582-005       | 614582-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <b>Field Id:</b>  | SS1A             | PH01             | PH01A            | PH02             | PH02A            | SS6A             |
|                                    | <b>Depth:</b>     | 2- ft            | 0.5- ft          | 2- ft            | 0.5- ft          | 2- ft            | 2- ft            |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <b>Sampled:</b>   | Feb-08-19 16:05  | Feb-08-19 16:15  | Feb-08-19 16:20  | Feb-08-19 16:35  | Feb-08-19 16:45  | Feb-08-19 16:50  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Feb-19-19 12:00  | Feb-19-19 12:00  | Feb-19-19 12:00  | Feb-19-19 12:00  | Feb-19-19 12:00  | Feb-19-19 12:00  |
|                                    | <b>Analyzed:</b>  | Feb-20-19 09:06  | Feb-20-19 09:25  | Feb-20-19 09:44  | Feb-20-19 10:03  | Feb-20-19 10:22  | Feb-20-19 10:41  |
|                                    | <b>Units/RL:</b>  | 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 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00401 0.00401 | <0.00401 0.00401 | <0.00398 0.00398 | <0.00402 0.00402 | <0.00400 0.00400 |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b> | Feb-15-19 15:45  | Feb-15-19 15:45  | Feb-15-19 15:45  | Feb-15-19 15:45  | Feb-15-19 15:45  | Feb-15-19 15:45  |
|                                    | <b>Analyzed:</b>  | Feb-15-19 18:05  | Feb-15-19 18:24  | Feb-15-19 18:30  | Feb-15-19 18:50  | Feb-15-19 18:56  | Feb-15-19 19:02  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | <4.99 4.99       | 21.8 4.97        | <4.98 4.98       | 17.1 4.99        | <5.00 5.00       | 12.5 4.95        |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Feb-15-19 15:00  | Feb-15-19 15:00  | Feb-15-19 15:00  | Feb-15-19 15:00  | Feb-15-19 15:00  | Feb-15-19 15:00  |
|                                    | <b>Analyzed:</b>  | Feb-15-19 20:23  | Feb-15-19 21:21  | Feb-15-19 21:40  | Feb-15-19 21:59  | Feb-15-19 22:19  | Feb-15-19 22:38  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | 564 15.0         | <15.0 15.0       | 43.3 15.0        | <14.9 14.9       | <15.0 15.0       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | 75.4 15.0        | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       |
| Total TPH                          |                   | <15.0 15.0       | 639 15.0         | <15.0 15.0       | 43.3 15.0        | <14.9 14.9       | <15.0 15.0       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: SS1A  
Lab Sample Id: 614582-001

Matrix: Soil  
Date Collected: 02.08.19 16.05

Date Received: 02.14.19 11.52  
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.15.19 15.45

Basis: Wet Weight

Seq Number: 3079394

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.99  | 4.99 | mg/kg | 02.15.19 18.05 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.15.19 15.00

Basis: Wet Weight

Seq Number: 3079495

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.15.19 20.23 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.15.19 20.23 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.15.19 20.23 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.15.19 20.23 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 02.15.19 20.23 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 02.15.19 20.23 |      |



# Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **SS1A**  
Lab Sample Id: 614582-001

Matrix: Soil  
Date Collected: 02.08.19 16.05

Date Received: 02.14.19 11.52  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.20.19 09.06       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 02.20.19 09.06       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.20.19 09.06       |             |     |





# Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH01** Matrix: Soil Date Received: 02.14.19 11.52  
 Lab Sample Id: 614582-002 Date Collected: 02.08.19 16.15 Sample Depth: 0.5 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.15.19 15.45 Basis: Wet Weight  
 Seq Number: 3079394

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 21.8   | 4.97 | mg/kg | 02.15.19 18.24 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.15.19 15.00 Basis: Wet Weight  
 Seq Number: 3079495

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.15.19 21.21 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 564    | 15.0 | mg/kg | 02.15.19 21.21 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 75.4   | 15.0 | mg/kg | 02.15.19 21.21 |      | 1   |
| Total TPH                          | PHC635     | 639    | 15.0 | mg/kg | 02.15.19 21.21 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 02.15.19 21.21 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 02.15.19 21.21 |      |



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH01**  
 Lab Sample Id: 614582-002

Matrix: Soil  
 Date Collected: 02.08.19 16.15

Date Received: 02.14.19 11.52  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.25       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 117               | %            | 70-130        | 02.20.19 09.25       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 02.20.19 09.25       |             |     |



# Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH01A**  
Lab Sample Id: 614582-003

Matrix: Soil  
Date Collected: 02.08.19 16.20

Date Received: 02.14.19 11.52  
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079394

Date Prep: 02.15.19 15.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.98  | 4.98 | mg/kg | 02.15.19 18.30 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079495

Date Prep: 02.15.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.15.19 21.40 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.15.19 21.40 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.15.19 21.40 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.15.19 21.40 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 110        | %     | 70-135 | 02.15.19 21.40 |      |
| o-Terphenyl    | 84-15-1    | 106        | %     | 70-135 | 02.15.19 21.40 |      |



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH01A**  
 Lab Sample Id: 614582-003

Matrix: Soil  
 Date Collected: 02.08.19 16.20

Date Received: 02.14.19 11.52  
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.20.19 09.44       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.20.19 09.44       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 02.20.19 09.44       |             |     |





## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH02**  
 Lab Sample Id: 614582-004

Matrix: Soil  
 Date Collected: 02.08.19 16.35

Date Received: 02.14.19 11.52  
 Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.15.19 15.45

Basis: Wet Weight

Seq Number: 3079394

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 17.1   | 4.99 | mg/kg | 02.15.19 18.50 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.15.19 15.00

Basis: Wet Weight

Seq Number: 3079495

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.15.19 21.59 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>43.3</b> | 15.0 | mg/kg | 02.15.19 21.59 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.15.19 21.59 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>43.3</b> | 15.0 | mg/kg | 02.15.19 21.59 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 02.15.19 21.59 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 02.15.19 21.59 |      |



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH02**  
 Lab Sample Id: 614582-004

Matrix: Soil  
 Date Collected: 02.08.19 16.35

Date Received: 02.14.19 11.52  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.20.19 10.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.20.19 10.03       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 02.20.19 10.03       |             |     |



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH02A**  
 Lab Sample Id: 614582-005

Matrix: Soil  
 Date Collected: 02.08.19 16.45

Date Received: 02.14.19 11.52  
 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.15.19 15.45

Basis: Wet Weight

Seq Number: 3079394

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.00  | 5.00 | mg/kg | 02.15.19 18.56 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.15.19 15.00

Basis: Wet Weight

Seq Number: 3079495

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 02.15.19 22.19 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 02.15.19 22.19 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 02.15.19 22.19 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 02.15.19 22.19 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 02.15.19 22.19 |      |
| o-Terphenyl    | 84-15-1    | 106        | %     | 70-135 | 02.15.19 22.19 |      |



# Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **PH02A**  
Lab Sample Id: 614582-005

Matrix: Soil  
Date Collected: 02.08.19 16.45

Date Received: 02.14.19 11.52  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.20.19 10.22       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.20.19 10.22       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 109               | %            | 70-130        | 02.20.19 10.22       |             |     |





# Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: **SS6A** Matrix: Soil Date Received: 02.14.19 11.52  
 Lab Sample Id: 614582-006 Date Collected: 02.08.19 16.50 Sample Depth: 2 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.15.19 15.45 Basis: Wet Weight  
 Seq Number: 3079394

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 12.5   | 4.95 | mg/kg | 02.15.19 19.02 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.15.19 15.00 Basis: Wet Weight  
 Seq Number: 3079495

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.15.19 22.38 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.15.19 22.38 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.15.19 22.38 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.15.19 22.38 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 02.15.19 22.38 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 02.15.19 22.38 |      |



## Certificate of Analytical Results 614582



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #5H

Sample Id: SS6A  
Lab Sample Id: 614582-006

Matrix: Soil  
Date Collected: 02.08.19 16.50

Date Received: 02.14.19 11.52  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.19.19 12.00

Basis: Wet Weight

Seq Number: 3079752

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.20.19 10.41       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 108               | %            | 70-130        | 02.20.19 10.41       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.20.19 10.41       |             |     |



## 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



## LT Environmental, Inc.

PLU CVX JV #5H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079394

MB Sample Id: 7671867-1-BLK

Matrix: Solid

LCS Sample Id: 7671867-1-BKS

Prep Method: E300P

Date Prep: 02.15.19

LCSD Sample Id: 7671867-1-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          | 243        | 97       | 234         | 94        | 90-110 | 4    | 20        | mg/kg | 02.15.19 16:19 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079394

Parent Sample Id: 614571-015

Matrix: Soil

MS Sample Id: 614571-015 S

Prep Method: E300P

Date Prep: 02.15.19

MSD Sample Id: 614571-015 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <0.850        | 248          | 247       | 100     | 255        | 103      | 90-110 | 3    | 20        | mg/kg | 02.15.19 16:38 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079394

Parent Sample Id: 614582-001

Matrix: Soil

MS Sample Id: 614582-001 S

Prep Method: E300P

Date Prep: 02.15.19

MSD Sample Id: 614582-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <0.857        | 250          | 264       | 106     | 245        | 98       | 90-110 | 7    | 20        | mg/kg | 02.15.19 18:11 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079495

MB Sample Id: 7671969-1-BLK

Matrix: Solid

LCS Sample Id: 7671969-1-BKS

Prep Method: TX1005P

Date Prep: 02.15.19

LCSD Sample Id: 7671969-1-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         | 907        | 91       | 1040        | 104       | 70-135 | 14   | 20        | mg/kg | 02.15.19 19:44 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 979        | 98       | 1190        | 119       | 70-135 | 19   | 20        | mg/kg | 02.15.19 19:44 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 125     |         | 129      |          | 115       |           | 70-135 | %     | 02.15.19 19:44 |
| o-Terphenyl    | 124     |         | 127      |          | 130       |           | 70-135 | %     | 02.15.19 19:44 |

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

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

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





## LT Environmental, Inc.

PLU CVX JV #5H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079495

Parent Sample Id: 614582-001

Matrix: Soil

MS Sample Id: 614582-001 S

Prep Method: TX1005P

Date Prep: 02.15.19

MSD Sample Id: 614582-001 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          | 997       | 100     | 972        | 97       | 70-135 | 3    | 20        | mg/kg | 02.15.19 20:42 |      |
| Diesel Range Organics (DRO)       | <8.12         | 999          | 1120      | 112     | 1090       | 109      | 70-135 | 3    | 20        | mg/kg | 02.15.19 20:42 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 128      |          | 70-135 | %     | 02.15.19 20:42 |
| o-Terphenyl    | 117     |         | 119      |          | 70-135 | %     | 02.15.19 20:42 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3079752

MB Sample Id: 7672139-1-BLK

Matrix: Solid

LCS Sample Id: 7672139-1-BKS

Prep Method: SW5030B

Date Prep: 02.19.19

LCSD Sample Id: 7672139-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000388 | 0.101        | 0.124      | 123      | 0.124       | 124       | 70-130 | 0    | 35        | mg/kg | 02.20.19 03:09 |      |
| Toluene      | <0.000459 | 0.101        | 0.106      | 105      | 0.105       | 105       | 70-130 | 1    | 35        | mg/kg | 02.20.19 03:09 |      |
| Ethylbenzene | <0.000569 | 0.101        | 0.0993     | 98       | 0.0987      | 99        | 70-130 | 1    | 35        | mg/kg | 02.20.19 03:09 |      |
| m,p-Xylenes  | <0.00102  | 0.202        | 0.197      | 98       | 0.196       | 98        | 70-130 | 1    | 35        | mg/kg | 02.20.19 03:09 |      |
| o-Xylene     | <0.000347 | 0.101        | 0.0988     | 98       | 0.0984      | 98        | 70-130 | 0    | 35        | mg/kg | 02.20.19 03:09 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 108     |         | 111      |          | 111       |           | 70-130 | %     | 02.20.19 03:09 |
| 4-Bromofluorobenzene | 93      |         | 100      |          | 98        |           | 70-130 | %     | 02.20.19 03:09 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3079752

Parent Sample Id: 614584-002

Matrix: Soil

MS Sample Id: 614584-002 S

Prep Method: SW5030B

Date Prep: 02.19.19

MSD Sample Id: 614584-002 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000385     | 0.100        | 0.112     | 112     | 0.115      | 115      | 70-130 | 3    | 35        | mg/kg | 02.20.19 03:47 |      |
| Toluene      | <0.000456     | 0.100        | 0.0955    | 96      | 0.0973     | 97       | 70-130 | 2    | 35        | mg/kg | 02.20.19 03:47 |      |
| Ethylbenzene | <0.000565     | 0.100        | 0.0859    | 86      | 0.0887     | 89       | 70-130 | 3    | 35        | mg/kg | 02.20.19 03:47 |      |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.171     | 86      | 0.176      | 88       | 70-130 | 3    | 35        | mg/kg | 02.20.19 03:47 |      |
| o-Xylene     | <0.000344     | 0.100        | 0.0873    | 87      | 0.0896     | 90       | 70-130 | 3    | 35        | mg/kg | 02.20.19 03:47 |      |

## Surrogate

|                      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 111     |         | 112      |          | 70-130 | %     | 02.20.19 03:47 |
| 4-Bromofluorobenzene | 104     |         | 103      |          | 70-130 | %     | 02.20.19 03:47 |

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

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

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

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



## Chain of Custody

**Work Order No.:**

9254

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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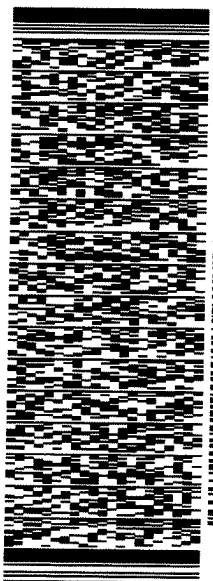
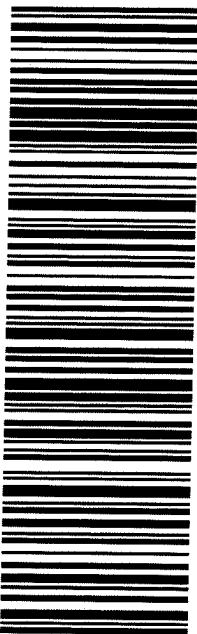
|                  |  |                                        |                         |                     |
|------------------|--|----------------------------------------|-------------------------|---------------------|
| Project Manager: |  | Adrian Baker                           | Bill to: (if different) | Kyle Litrell        |
| 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:        | Carsbad, NM 88220   |
| Phone:           |  | 432.704.5178                           | Email:                  | bbeiliii@ltenv.com  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div> <div>Work Order Comments</div> <div> <div> <div>Program: UST/PST</div> <div><input type="checkbox"/> PRP</div> <div><input type="checkbox"/> brownfields</div> <div><input type="checkbox"/> RC</div> <div><input type="checkbox"/> Superfund</div> </div> <div> <div>State of Project:</div> <div> <div>Reporting:Level II</div> <div><input type="checkbox"/> Level III</div> <div><input type="checkbox"/> ST/UST</div> <div><input type="checkbox"/> RRP</div> <div><input type="checkbox"/> Level IV</div> </div> </div> </div> <div> <div>Deliverables: EDD</div> <div><input type="checkbox"/> ADAPT</div> <div><input type="checkbox"/> Other:</div> </div> </div> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|                                                               |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |
|---------------------------------------------------------------|--|--|--|--------|--|---------------------------------------------------------------------|--|---------------------------------------------------------------------|--|----------|--|---------------------------------------------------------------------|---------------------------------------------|--|
| Project Name:                                                 |  |  |  |        |  | PLU CUX JV #5H                                                      |  |                                                                     |  |          |  |                                                                     | Turn Around                                 |  |
| Project Number:                                               |  |  |  |        |  | 28P-4779, 28P-4775                                                  |  |                                                                     |  |          |  |                                                                     | Routine <input checked="" type="checkbox"/> |  |
| P.O. Number:                                                  |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     | Rush:                                       |  |
| Sampler's Name:                                               |  |  |  |        |  | Benjamin Beilli                                                     |  |                                                                     |  |          |  |                                                                     | Due Date:                                   |  |
| <b>SAMPLE RECEIPT</b>                                         |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |
| Temperature (°C):                                             |  |  |  |        |  | Temp Blank:                                                         |  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |  | Wet Ice: |  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                             |  |
| Received Intact:                                              |  |  |  |        |  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  | Thermometer ID: PE                                                  |  |          |  |                                                                     |                                             |  |
| Cooler Custody Seals:                                         |  |  |  |        |  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |  | Correction Factor:                                                  |  | -0.1     |  |                                                                     |                                             |  |
| Sample Custody Seals:                                         |  |  |  |        |  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |  | Total Containers:                                                   |  |          |  |                                                                     |                                             |  |
| Sample Identification                                         |  |  |  | Matrix |  | Date Sampled                                                        |  | Time Sampled                                                        |  | Depth    |  | Number of Containers                                                |                                             |  |
| SS1A                                                          |  |  |  | S      |  | 2/8/19                                                              |  | 1605                                                                |  | 2'       |  | 1                                                                   |                                             |  |
| PH01                                                          |  |  |  |        |  |                                                                     |  | 1615                                                                |  | 0.5'     |  | X                                                                   |                                             |  |
| PH01A                                                         |  |  |  |        |  |                                                                     |  | 1620                                                                |  | 2'       |  | X X X                                                               |                                             |  |
| PH02                                                          |  |  |  |        |  |                                                                     |  | 1635                                                                |  | 0.5'     |  | X X X                                                               |                                             |  |
| PH02A                                                         |  |  |  |        |  |                                                                     |  | 1645                                                                |  | 2'       |  | X X X                                                               |                                             |  |
| SS6A                                                          |  |  |  | ↑      |  | ↑                                                                   |  | 1650                                                                |  | 2'       |  | X X X                                                               |                                             |  |
| BOSB                                                          |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |
| 2/8/19                                                        |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |
| TAT starts the day received by the lab, if received by 4:30pm |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |
| Sample Comments<br>discuss                                    |  |  |  |        |  |                                                                     |  |                                                                     |  |          |  |                                                                     |                                             |  |

[illegible]

| Relinquished by: (Signature)                                                        | Received by: (Signature)                                                           | Date/Time      | Relinquished by: (Signature)                                                          | Received by: (Signature)                                                            | Date/Time |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
| 1   |   | 2 (13/14 12:30 | 2    |    | 2/14/19   |
| 3  |  | 4              | 4  |  | 11:52     |
| 5                                                                                   |                                                                                    | 6              |                                                                                       |                                                                                     |           |

|                                                                                                                                                                               |                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| ORIGIN ID:CAOA (575) 887-6245                                                                                                                                                 | SHIP DATE: 13FEB19                                                                |
| XENCO                                                                                                                                                                         | ACTWGT: 21.00 LB                                                                  |
| PAC N MAIL                                                                                                                                                                    | CAD: 101813706/NET4100                                                            |
| 910 W PIERCE ST                                                                                                                                                               | DIMS: 18x12x16 IN                                                                 |
| CARLSBAD, NM 88220                                                                                                                                                            | BILL RECIPIENT                                                                    |
| UNITED STATES US                                                                                                                                                              |                                                                                   |
| <b>TO HOLD FOR XENCO</b><br><b>FEDEX EXPRESS SHIP CENTER</b><br><b>FEDEX SHIP CENTER</b><br><b>3600 COUNTY RD 1276 S</b><br><b>MIDLAND TX 79711</b><br>(806) 794-1296<br>REF: |                                                                                   |
| PO: INV: DEPT:                                                                                                                                                                |                                                                                   |
|           |                                                                                   |
| TRK# 7744 6580 1236<br>0201<br><b>41 MAFA</b><br>TX-US LBB<br>THU - 14 FEB HOLD<br>STANDARD OVERNIGHT<br>HLD                                                                  |  |

565J20E3D/23AD

**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](http://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.



Client: LT Environmental, Inc.

Date/ Time Received: 02/14/2019 11:52:00 AM

Work Order #: 614582

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/14/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/14/2019



# Analytical Report 614846

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**26-FEB-19**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



26-FEB-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **614846**

**PLU CVX JV #005H**

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) 614846. 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. 614846 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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

**Sample Cross Reference 614846****LT Environmental, Inc., Arvada, CO**

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW05      | S      | 02-13-19 10:35 | 1            | 614846-001    |
| SW06      | S      | 02-13-19 10:37 | 1            | 614846-002    |
| SW08      | S      | 02-13-19 11:40 | 1            | 614846-003    |
| SW07      | S      | 02-13-19 11:42 | 1            | 614846-004    |
| FS03      | S      | 02-13-19 14:00 | 1            | 614846-005    |
| FS04      | S      | 02-13-19 14:40 | 1            | 614846-006    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093  
Work Order Number(s): 614846

Report Date: 26-FEB-19  
Date Received: 02/18/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3079750 Inorganic Anions by EPA 300

Lab Sample ID 614851-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 614846-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3080174 BTEX by EPA 8021B

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





# Certificate of Analysis Summary 614846

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Mon Feb-18-19 07:33 am  
**Report Date:** 26-FEB-19  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 614846-001       | 614846-002       | 614846-003       | 614846-004       | 614846-005       | 614846-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SW05             | SW06             | SW08             | SW07             | FS03             | FS04             |
|                                    | <i>Depth:</i>     | 1-               | 1-               | 1-               | 1-               | 1-               | 1-               |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Feb-13-19 10:35  | Feb-13-19 10:37  | Feb-13-19 11:40  | Feb-13-19 11:42  | Feb-13-19 14:00  | Feb-13-19 14:40  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-22-19 13:30  | Feb-22-19 13:30  | Feb-22-19 13:30  | Feb-22-19 13:30  | Feb-22-19 13:30  | Feb-22-19 13:30  |
|                                    | <i>Analyzed:</i>  | Feb-23-19 01:00  | Feb-23-19 01:19  | Feb-23-19 01:38  | Feb-23-19 01:57  | Feb-23-19 02:16  | Feb-23-19 02:35  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Toluene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00399 0.00399 | <0.00400 0.00400 | <0.00400 0.00400 | <0.00402 0.00402 | <0.00404 0.00404 |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Total Xylenes                      |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  |
|                                    | <i>Analyzed:</i>  | Feb-19-19 23:28  | Feb-19-19 23:34  | Feb-19-19 23:41  | Feb-19-19 23:53  | Feb-19-19 23:47  | Feb-20-19 00:12  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 791 4.96         | 1000 4.95        | 1540 24.8        | 1140 4.95        | 2410 25.0        | 3750 24.8        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  |
|                                    | <i>Analyzed:</i>  | Feb-18-19 13:05  | Feb-18-19 14:04  | Feb-18-19 14:24  | Feb-18-19 14:44  | Feb-18-19 15:04  | Feb-18-19 15:24  |
|                                    | <i>Units/RL:</i>  | 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)        |                   | 120 15.0         | 15.2 15.0        | 42.2 15.0        | <15.0 15.0       | <15.0 15.0       | 23.0 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                          |                   | 120 15.0         | 15.2 15.0        | 42.2 15.0        | <15.0 15.0       | <15.0 15.0       | 23.0 15.0        |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW05**  
Lab Sample Id: 614846-001

Matrix: Soil  
Date Collected: 02.13.19 10.35

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079750

Date Prep: 02.19.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 791    | 4.96 | mg/kg | 02.19.19 23.28 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result     | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0      | 15.0 | mg/kg | 02.18.19 13.05 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>120</b> | 15.0 | mg/kg | 02.18.19 13.05 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0      | 15.0 | mg/kg | 02.18.19 13.05 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>120</b> | 15.0 | mg/kg | 02.18.19 13.05 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 02.18.19 13.05 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 02.18.19 13.05 |      |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW05**  
Lab Sample Id: 614846-001

Matrix: Soil  
Date Collected: 02.13.19 10.35

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.22.19 13.30

Basis: Wet Weight

Seq Number: 3080174

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.23.19 01.00       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 113               | %            | 70-130        | 02.23.19 01.00       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 123               | %            | 70-130        | 02.23.19 01.00       |             |     |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW06** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614846-002 Date Collected: 02.13.19 10.37 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1000   | 4.95 | mg/kg | 02.19.19 23.34 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 14.04 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 15.2   | 15.0 | mg/kg | 02.18.19 14.04 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 14.04 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | 15.2   | 15.0 | mg/kg | 02.18.19 14.04 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 108        | %     | 70-135 | 02.18.19 14.04 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 02.18.19 14.04 |      |





# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW06**  
Lab Sample Id: 614846-002

Matrix: Soil  
Date Collected: 02.13.19 10.37

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080174

Date Prep: 02.22.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.19       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 02.23.19 01.19       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 127               | %            | 70-130        | 02.23.19 01.19       |             |     |



## Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW08**  
 Lab Sample Id: 614846-003

Matrix: Soil  
 Date Collected: 02.13.19 11.40

Date Received: 02.18.19 07.33  
 Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.19.19 13.50

Basis: Wet Weight

Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1540   | 24.8 | mg/kg | 02.19.19 23.41 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.18.19 10.00

Basis: Wet Weight

Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 14.24 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>42.2</b> | 15.0 | mg/kg | 02.18.19 14.24 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 14.24 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>42.2</b> | 15.0 | mg/kg | 02.18.19 14.24 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.18.19 14.24 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 02.18.19 14.24 |      |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW08**  
Lab Sample Id: 614846-003

Matrix: Soil  
Date Collected: 02.13.19 11.40

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.22.19 13.30

Basis: Wet Weight

Seq Number: 3080174

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.38       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 127               | %            | 70-130        | 02.23.19 01.38       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 107               | %            | 70-130        | 02.23.19 01.38       |             |     |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW07**  
Lab Sample Id: 614846-004

Matrix: Soil  
Date Collected: 02.13.19 11.42

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079750

Date Prep: 02.19.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1140   | 4.95 | mg/kg | 02.19.19 23.53 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 14.44 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.18.19 14.44 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 14.44 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.18.19 14.44 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.18.19 14.44 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 02.18.19 14.44 |      |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW07**  
Lab Sample Id: 614846-004

Matrix: Soil  
Date Collected: 02.13.19 11.42

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.22.19 13.30

Basis: Wet Weight

Seq Number: 3080174

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.23.19 01.57       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 113               | %            | 70-130        | 02.23.19 01.57       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.23.19 01.57       |             |     |





# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS03** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614846-005 Date Collected: 02.13.19 14.00 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2410   | 25.0 | mg/kg | 02.19.19 23.47 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 15.04 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.18.19 15.04 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 15.04 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.18.19 15.04 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 02.18.19 15.04 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 02.18.19 15.04 |      |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS03**  
Lab Sample Id: 614846-005

Matrix: Soil  
Date Collected: 02.13.19 14.00

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.22.19 13.30

Basis: Wet Weight

Seq Number: 3080174

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.23.19 02.16       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.23.19 02.16       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 117               | %            | 70-130        | 02.23.19 02.16       |             |     |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS04** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614846-006 Date Collected: 02.13.19 14.40 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 3750   | 24.8 | mg/kg | 02.20.19 00.12 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 15.24 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>23.0</b> | 15.0 | mg/kg | 02.18.19 15.24 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 15.24 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>23.0</b> | 15.0 | mg/kg | 02.18.19 15.24 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 02.18.19 15.24 |      |
| o-Terphenyl    | 84-15-1    | 110        | %     | 70-135 | 02.18.19 15.24 |      |



# Certificate of Analytical Results 614846



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS04**  
Lab Sample Id: 614846-006

Matrix: Soil  
Date Collected: 02.13.19 14.40

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.22.19 13.30

Basis: Wet Weight

Seq Number: 3080174

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.23.19 02.35       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 123               | %            | 70-130        | 02.23.19 02.35       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.23.19 02.35       |             |     |



## 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





## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

MB Sample Id: 7672095-1-BLK

Matrix: Solid

LCS Sample Id: 7672095-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672095-1-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          | 235        | 94       | 236         | 94        | 90-110 | 0    | 20        | mg/kg | 02.19.19 22:11 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614846-004

Matrix: Soil

MS Sample Id: 614846-004 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614846-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 1140          | 248          | 1350      | 85      | 1360       | 89       | 90-110 | 1    | 20        | mg/kg | 02.19.19 23:59 | X    |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614851-005

Matrix: Soil

MS Sample Id: 614851-005 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614851-005 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 14.8          | 250          | 268       | 101     | 271        | 102      | 90-110 | 1    | 20        | mg/kg | 02.19.19 22:30 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

MB Sample Id: 7672046-1-BLK

Matrix: Solid

LCS Sample Id: 7672046-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.19

LCSD Sample Id: 7672046-1-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         | 832        | 83       | 969         | 97        | 70-135 | 15   | 20        | mg/kg | 02.18.19 12:26 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 922        | 92       | 1080        | 108       | 70-135 | 16   | 20        | mg/kg | 02.18.19 12:26 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 78      |         | 118      |          | 127       |           | 70-135 | %     | 02.18.19 12:26 |
| o-Terphenyl    | 79      |         | 111      |          | 111       |           | 70-135 | %     | 02.18.19 12:26 |

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

Parent Sample Id: 614846-001

Matrix: Soil

MS Sample Id: 614846-001 S

Prep Method: TX1005P

Date Prep: 02.18.19

MSD Sample Id: 614846-001 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          | 976       | 98      | 887        | 89       | 70-135 | 10   | 20        | mg/kg | 02.18.19 13:25 |      |
| Diesel Range Organics (DRO)       | 120           | 998          | 1150      | 103     | 1050       | 93       | 70-135 | 9    | 20        | mg/kg | 02.18.19 13:25 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 129      |          | 70-135 | %     | 02.18.19 13:25 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 02.18.19 13:25 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080174

MB Sample Id: 7672387-1-BLK

Matrix: Solid

LCS Sample Id: 7672387-1-BKS

Prep Method: SW5030B

Date Prep: 02.22.19

LCSD Sample Id: 7672387-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000388 | 0.101        | 0.116      | 115      | 0.119       | 119       | 70-130 | 3    | 35        | mg/kg | 02.22.19 22:49 |      |
| Toluene      | <0.000459 | 0.101        | 0.0999     | 99       | 0.101       | 101       | 70-130 | 1    | 35        | mg/kg | 02.22.19 22:49 |      |
| Ethylbenzene | <0.000569 | 0.101        | 0.0941     | 93       | 0.0950      | 95        | 70-130 | 1    | 35        | mg/kg | 02.22.19 22:49 |      |
| m,p-Xylenes  | <0.00102  | 0.202        | 0.188      | 93       | 0.190       | 95        | 70-130 | 1    | 35        | mg/kg | 02.22.19 22:49 |      |
| o-Xylene     | <0.000347 | 0.101        | 0.0944     | 93       | 0.0952      | 95        | 70-130 | 1    | 35        | mg/kg | 02.22.19 22:49 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 110      |          | 110       |           | 70-130 | %     | 02.22.19 22:49 |
| 4-Bromofluorobenzene | 95      |         | 102      |          | 102       |           | 70-130 | %     | 02.22.19 22:49 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080174

Parent Sample Id: 614844-001

Matrix: Soil

MS Sample Id: 614844-001 S

Prep Method: SW5030B

Date Prep: 02.22.19

MSD Sample Id: 614844-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000384     | 0.0998       | 0.100     | 100     | 0.102      | 102      | 70-130 | 2    | 35        | mg/kg | 02.22.19 23:27 |      |
| Toluene      | <0.000455     | 0.0998       | 0.0856    | 86      | 0.0868     | 87       | 70-130 | 1    | 35        | mg/kg | 02.22.19 23:27 |      |
| Ethylbenzene | <0.000564     | 0.0998       | 0.0808    | 81      | 0.0816     | 82       | 70-130 | 1    | 35        | mg/kg | 02.22.19 23:27 |      |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.161     | 81      | 0.163      | 82       | 70-130 | 1    | 35        | mg/kg | 02.22.19 23:27 |      |
| o-Xylene     | <0.000344     | 0.0998       | 0.0798    | 80      | 0.0805     | 81       | 70-130 | 1    | 35        | mg/kg | 02.22.19 23:27 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 111     |         | 112      |          | 70-130 | %     | 02.22.19 23:27 |
| 4-Bromofluorobenzene | 103     |         | 104      |          | 70-130 | %     | 02.22.19 23:27 |

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

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

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

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



## Chain of Custody

Work Order No. 1614844

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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Page 1 of 1

|                  |                                        |                         |                                    |
|------------------|----------------------------------------|-------------------------|------------------------------------|
| Project Manager: | Adrian Baker                           | Bill to: (if different) | Kyle Littlell                      |
| Company Name:    | LI 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    | <input type="checkbox"/> RP <input type="checkbox"/> Rowfields <input type="checkbox"/> C <input type="checkbox"/> perfund       |
| State of Project:   |                                                                                                                                  |
| Reporting Level II  | <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV |
| Deliverables: EDD   | <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                   |

|                 |                  |             |   |
|-----------------|------------------|-------------|---|
| Project Name:   | PLU CVX JV #005H | Turn Around |   |
| Project Number: | 12918093         | Route       | 1 |
| P.O. Number:    | 2RP-2625         | Rush:       |   |
| Sampler's Name: | Martin Wills     | Due Date:   |   |

|                       |                                                                     |                    |                                                                     |          |                                                                     |
|-----------------------|---------------------------------------------------------------------|--------------------|---------------------------------------------------------------------|----------|---------------------------------------------------------------------|
| SAMPLE RECEIPT        |                                                                     | Temp Blank:        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Wet Ice: | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Temperature (°C):     | 0.30, 0.2                                                           | Thermometer ID:    | CE                                                                  |          |                                                                     |
| Received Intact:      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Correction Factor: | -0.1                                                                |          |                                                                     |
| Cooler Custody Seals: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Total Containers:  |                                                                     |          |                                                                     |
| Sample Custody Seals: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                    |                                                                     |          |                                                                     |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers |                 |                      |  |  |  |  |  |  |  |  |
|-----------------------|--------|--------------|--------------|-------|----------------------|-----------------|----------------------|--|--|--|--|--|--|--|--|
|                       |        |              |              |       | TPH (EPA 8015)       | BTEX (EPA 8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |  |  |
| SW05                  | S      | 2/13/2019    | 1035         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |
| SW06                  | S      | 2/13/2019    | 1037         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |
| SW08                  | S      | 2/13/2019    | 1140         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |
| SW07                  | S      | 2/13/2019    | 1142         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |
| FS03                  | S      | 2/13/2019    | 1400         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |
| FS04                  | S      | 2/13/2019    | 1440         | 1     | X                    | X               | X                    |  |  |  |  |  |  |  |  |

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

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 Ti Sn U V Zn

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |           |                              |                          |           |
|------------------------------|--------------------------|-----------|------------------------------|--------------------------|-----------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|                              |                          | 2/13/2019 |                              |                          | 2/13/2019 |
|                              |                          |           |                              |                          | 0753      |

Revised Date 05/14/18 Rev. 2018.1

|                                                                                                                             |      |                                                                                                         |  |
|-----------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------|--|
| ORIGIN ID: CACA (575) 887-6245<br>XENCO SATURDAY<br>PAC N MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US |      | SHIP DATE: 15FEB19<br>ACTWGT: 74.00 LB<br>CAD: 101813706/NM14100<br>DIMS: 25x15x15 IN<br>BILL RECIPIENT |  |
| TO HOLD FOR XENCO                                                                                                           |      |                                                                                                         |  |
| 200 W INTERSTATE 20                                                                                                         |      |                                                                                                         |  |
| MIDLAND TX 79701                                                                                                            |      |                                                                                                         |  |
| (806) 674-0639                                                                                                              |      | REF: XENCO                                                                                              |  |
| PO:                                                                                                                         | INV: | DEPT:                                                                                                   |  |

TRK# 7744 8732 2463

0201

**41 MAFA**

TX-US LBB

79701

SATURDAY HOLD

PRIORITY OVERNIGHT

HLD



191019010701

**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](http://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.



Client: LT Environmental, Inc.

Date/ Time Received: 02/18/2019 07:33:00 AM

Work Order #: 614846

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/18/2019



# Analytical Report 614847

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**26-FEB-19**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



26-FEB-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **614847**

**PLU CVX JV #005H**

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) 614847. 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. 614847 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 614847

LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| FS05      | S      | 02-14-19 09:10 | 2            | 614847-001    |
| FS06      | S      | 02-14-19 09:12 | 2            | 614847-002    |
| FS07      | S      | 02-14-19 10:39 | 2            | 614847-003    |
| FS08      | S      | 02-14-19 10:39 | 6            | 614847-004    |
| SW09      | S      | 02-14-19 11:18 | 2 - 6        | 614847-005    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093  
Work Order Number(s): 614847

Report Date: 26-FEB-19  
Date Received: 02/18/2019

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3080077 BTEX by EPA 8021B

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

Batch: LBA-3080170 BTEX by EPA 8021B

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

Lab Sample ID 614847-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 614847-004, -005.

The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 614847

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Mon Feb-18-19 07:33 am  
**Report Date:** 26-FEB-19  
**Project Manager:** Jessica Kramer

| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 614847-001       | 614847-002       | 614847-003       | 614847-004       | 614847-005       |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|--|
|                                    | <b>Field Id:</b>  | FS05             | FS06             | FS07             | FS08             | SW09             |  |
|                                    | <b>Depth:</b>     | 2-               | 2-               | 2-               | 6-               | 2-6              |  |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |  |
|                                    | <b>Sampled:</b>   | Feb-14-19 09:10  | Feb-14-19 09:12  | Feb-14-19 10:39  | Feb-14-19 10:39  | Feb-14-19 11:18  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Feb-21-19 12:30  | Feb-21-19 12:30  | Feb-21-19 12:30  | Feb-21-19 15:00  | Feb-21-19 15:00  |  |
|                                    | <b>Analyzed:</b>  | Feb-22-19 10:36  | Feb-22-19 10:55  | Feb-22-19 11:14  | Feb-22-19 14:03  | Feb-22-19 14:51  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |
| Benzene                            |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| Toluene                            |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00402 0.00402 | <0.00398 0.00398 | <0.00401 0.00401 | <0.00398 0.00398 |  |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| Total Xylenes                      |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00199 0.00199 |  |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b> | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 13:50  |  |
|                                    | <b>Analyzed:</b>  | Feb-20-19 00:18  | Feb-20-19 00:39  | Feb-20-19 00:46  | Feb-20-19 00:52  | Feb-20-19 00:58  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |
| Chloride                           |                   | 836 5.00         | 807 4.99         | 558 4.97         | 3630 24.9        | 1360 25.0        |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  |  |
|                                    | <b>Analyzed:</b>  | Feb-18-19 16:03  | Feb-18-19 16:23  | Feb-18-19 16:42  | Feb-18-19 17:40  | Feb-18-19 17:59  |  |
|                                    | <b>Units/RL:</b>  | 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       |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | 94.8 15.0        | 23.3 15.0        | 47.8 15.0        | 135 15.0         |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | 19.8 15.0        |  |
| Total TPH                          |                   | <15.0 15.0       | 94.8 15.0        | 23.3 15.0        | 47.8 15.0        | 155 15.0         |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant





# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS05** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614847-001 Date Collected: 02.14.19 09.10 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 836    | 5.00 | mg/kg | 02.20.19 00.18 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 16.03 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.18.19 16.03 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 16.03 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.18.19 16.03 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 91         | %     | 70-135 | 02.18.19 16.03 |      |
| o-Terphenyl    | 84-15-1    | 87         | %     | 70-135 | 02.18.19 16.03 |      |



# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS05**  
Lab Sample Id: 614847-001

Matrix: Soil  
Date Collected: 02.14.19 09.10

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.21.19 12.30

Basis: Wet Weight

Seq Number: 3080077

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.36       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 02.22.19 10.36       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 125               | %            | 70-130        | 02.22.19 10.36       |             |     |



## Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS06** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614847-002 Date Collected: 02.14.19 09.12 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 807    | 4.99 | mg/kg | 02.20.19 00.39 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 16.23 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>94.8</b> | 15.0 | mg/kg | 02.18.19 16.23 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 16.23 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>94.8</b> | 15.0 | mg/kg | 02.18.19 16.23 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.18.19 16.23 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 02.18.19 16.23 |      |



# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS06**  
Lab Sample Id: 614847-002

Matrix: Soil  
Date Collected: 02.14.19 09.12

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3080077

Date Prep: 02.21.19 12.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 10.55       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 116               | %            | 70-130        | 02.22.19 10.55       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.22.19 10.55       |             |     |



## Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS07**  
 Lab Sample Id: 614847-003

Matrix: Soil  
 Date Collected: 02.14.19 10.39

Date Received: 02.18.19 07.33  
 Sample Depth: 2

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.19.19 13.50

Basis: Wet Weight

Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 558    | 4.97 | mg/kg | 02.20.19 00.46 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.18.19 10.00

Basis: Wet Weight

Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 16.42 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>23.3</b> | 15.0 | mg/kg | 02.18.19 16.42 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 16.42 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>23.3</b> | 15.0 | mg/kg | 02.18.19 16.42 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.18.19 16.42 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 02.18.19 16.42 |      |





# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS07**  
Lab Sample Id: 614847-003

Matrix: Soil  
Date Collected: 02.14.19 10.39

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.21.19 12.30

Basis: Wet Weight

Seq Number: 3080077

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 11.14       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 112               | %            | 70-130        | 02.22.19 11.14       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 11.14       |             |     |



# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS08** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614847-004 Date Collected: 02.14.19 10.39 Sample Depth: 6  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 3630   | 24.9 | mg/kg | 02.20.19 00.52 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 17.40 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>47.8</b> | 15.0 | mg/kg | 02.18.19 17.40 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 17.40 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>47.8</b> | 15.0 | mg/kg | 02.18.19 17.40 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 113        | %     | 70-135 | 02.18.19 17.40 |      |
| o-Terphenyl    | 84-15-1    | 113        | %     | 70-135 | 02.18.19 17.40 |      |



# Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS08**  
Lab Sample Id: 614847-004

Matrix: Soil  
Date Collected: 02.14.19 10.39

Date Received: 02.18.19 07.33  
Sample Depth: 6

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080170

Date Prep: 02.21.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 14.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 108               | %            | 70-130        | 02.22.19 14.03       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 114               | %            | 70-130        | 02.22.19 14.03       |             |     |



## Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW09**  
 Lab Sample Id: 614847-005

Matrix: Soil  
 Date Collected: 02.14.19 11.18

Date Received: 02.18.19 07.33  
 Sample Depth: 2 - 6

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.19.19 13.50

Basis: Wet Weight

Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1360   | 25.0 | mg/kg | 02.20.19 00.58 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.18.19 10.00

Basis: Wet Weight

Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 17.59 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 135    | 15.0 | mg/kg | 02.18.19 17.59 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 19.8   | 15.0 | mg/kg | 02.18.19 17.59 |      | 1   |
| Total TPH                          | PHC635     | 155    | 15.0 | mg/kg | 02.18.19 17.59 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.18.19 17.59 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 02.18.19 17.59 |      |



## Certificate of Analytical Results 614847



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW09**  
 Lab Sample Id: 614847-005

Matrix: Soil  
 Date Collected: 02.14.19 11.18

Date Received: 02.18.19 07.33  
 Sample Depth: 2 - 6

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 14.51       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 120               | %            | 70-130        | 02.22.19 14.51       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 94                | %            | 70-130        | 02.22.19 14.51       |             |     |





## 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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

MB Sample Id: 7672095-1-BLK

Matrix: Solid

LCS Sample Id: 7672095-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672095-1-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          | 235        | 94       | 236         | 94        | 90-110 | 0    | 20        | mg/kg | 02.19.19 22:11 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614846-004

Matrix: Soil

MS Sample Id: 614846-004 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614846-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 1140          | 248          | 1350      | 85      | 1360       | 89       | 90-110 | 1    | 20        | mg/kg | 02.19.19 23:59 | X    |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614851-005

Matrix: Soil

MS Sample Id: 614851-005 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614851-005 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 14.8          | 250          | 268       | 101     | 271        | 102      | 90-110 | 1    | 20        | mg/kg | 02.19.19 22:30 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

MB Sample Id: 7672046-1-BLK

Matrix: Solid

LCS Sample Id: 7672046-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.19

LCSD Sample Id: 7672046-1-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         | 832        | 83       | 969         | 97        | 70-135 | 15   | 20        | mg/kg | 02.18.19 12:26 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 922        | 92       | 1080        | 108       | 70-135 | 16   | 20        | mg/kg | 02.18.19 12:26 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 78      |         | 118      |          | 127       |           | 70-135 | %     | 02.18.19 12:26 |
| o-Terphenyl    | 79      |         | 111      |          | 111       |           | 70-135 | %     | 02.18.19 12:26 |

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

Parent Sample Id: 614846-001

Matrix: Soil

MS Sample Id: 614846-001 S

Prep Method: TX1005P

Date Prep: 02.18.19

MSD Sample Id: 614846-001 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          | 976       | 98      | 887        | 89       | 70-135 | 10   | 20        | mg/kg | 02.18.19 13:25 |      |
| Diesel Range Organics (DRO)       | 120           | 998          | 1150      | 103     | 1050       | 93       | 70-135 | 9    | 20        | mg/kg | 02.18.19 13:25 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 129      |          | 70-135 | %     | 02.18.19 13:25 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 02.18.19 13:25 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080077

MB Sample Id: 7672326-1-BLK

Matrix: Solid

LCS Sample Id: 7672326-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.19

LCSD Sample Id: 7672326-1-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        | 0.124      | 123      | 0.119       | 119       | 70-130 | 4    | 35        | mg/kg | 02.22.19 02:26 |      |
| Toluene      | <0.000458 | 0.101        | 0.108      | 107      | 0.102       | 102       | 70-130 | 6    | 35        | mg/kg | 02.22.19 02:26 |      |
| Ethylbenzene | <0.000568 | 0.101        | 0.102      | 101      | 0.0959      | 96        | 70-130 | 6    | 35        | mg/kg | 02.22.19 02:26 |      |
| m,p-Xylenes  | <0.00102  | 0.201        | 0.199      | 99       | 0.189       | 95        | 70-130 | 5    | 35        | mg/kg | 02.22.19 02:26 |      |
| o-Xylene     | <0.000346 | 0.101        | 0.101      | 100      | 0.0962      | 97        | 70-130 | 5    | 35        | mg/kg | 02.22.19 02:26 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 109      |          | 110       |           | 70-130 | %     | 02.22.19 02:26 |
| 4-Bromofluorobenzene | 93      |         | 104      |          | 104       |           | 70-130 | %     | 02.22.19 02:26 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

MB Sample Id: 7672385-1-BLK

Matrix: Solid

LCS Sample Id: 7672385-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.19

LCSD Sample Id: 7672385-1-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       | 0.124      | 125      | 0.122       | 122       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Toluene      | <0.000453 | 0.0994       | 0.105      | 106      | 0.103       | 103       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Ethylbenzene | <0.000561 | 0.0994       | 0.0980     | 99       | 0.0960      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.194      | 97       | 0.190       | 95        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| o-Xylene     | <0.000342 | 0.0994       | 0.0977     | 98       | 0.0958      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 111      |          | 110       |           | 70-130 | %     | 02.22.19 12:10 |
| 4-Bromofluorobenzene | 95      |         | 100      |          | 100       |           | 70-130 | %     | 02.22.19 12:10 |

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080077

Parent Sample Id: 614845-023

Matrix: Soil

MS Sample Id: 614845-023 S

Prep Method: SW5030B

Date Prep: 02.21.19

MSD Sample Id: 614845-023 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        | 0.108     | 108     | 0.112      | 112      | 70-130 | 4    | 35        | mg/kg | 02.22.19 03:04 |      |
| Toluene      | 0.000709      | 0.100        | 0.0890    | 88      | 0.0897     | 89       | 70-130 | 1    | 35        | mg/kg | 02.22.19 03:04 |      |
| Ethylbenzene | <0.000567     | 0.100        | 0.0754    | 75      | 0.0701     | 70       | 70-130 | 7    | 35        | mg/kg | 02.22.19 03:04 |      |
| m,p-Xylenes  | 0.00564       | 0.201        | 0.147     | 70      | 0.136      | 65       | 70-130 | 8    | 35        | mg/kg | 02.22.19 03:04 | X    |
| o-Xylene     | 0.000948      | 0.100        | 0.0774    | 76      | 0.0726     | 72       | 70-130 | 6    | 35        | mg/kg | 02.22.19 03:04 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 110     |         | 112      |          | 70-130 | %     | 02.22.19 03:04 |
| 4-Bromofluorobenzene | 112     |         | 112      |          | 70-130 | %     | 02.22.19 03:04 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

Parent Sample Id: 614847-004

Matrix: Soil

MS Sample Id: 614847-004 S

Prep Method: SW5030B

Date Prep: 02.21.19

MSD Sample Id: 614847-004 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000387     | 0.101        | 0.0715    | 71      | 0.0615     | 62       | 70-130 | 15   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Toluene      | <0.000458     | 0.101        | 0.0692    | 69      | 0.0587     | 59       | 70-130 | 16   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Ethylbenzene | <0.000568     | 0.101        | 0.0871    | 86      | 0.0771     | 77       | 70-130 | 12   | 35        | mg/kg | 02.22.19 12:48 |      |
| m,p-Xylenes  | <0.00102      | 0.201        | 0.153     | 76      | 0.145      | 73       | 70-130 | 5    | 35        | mg/kg | 02.22.19 12:48 |      |
| o-Xylene     | <0.000346     | 0.101        | 0.0846    | 84      | 0.0770     | 77       | 70-130 | 9    | 35        | mg/kg | 02.22.19 12:48 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 112     |         | 111      |          | 70-130 | %     | 02.22.19 12:48 |
| 4-Bromofluorobenzene | 105     |         | 107      |          | 70-130 | %     | 02.22.19 12:48 |

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

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

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

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



## Chain of Custody

**Work Order No:**

1214847

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 7 of 7

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

| Work Order Comments                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>Program:</b> UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Rowfields <input type="checkbox"/> C <input type="checkbox"/> perfund <input type="checkbox"/>          |  |  |  |  |  |  |  |  |  |
| <b>State of Project:</b>                                                                                                                                                             |  |  |  |  |  |  |  |  |  |
| <b>Reporting:</b> Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/> |  |  |  |  |  |  |  |  |  |
| <b>Deliverables:</b> EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other:                                                                                              |  |  |  |  |  |  |  |  |  |

|                 |                  |                                                                                                            |                                                         |
|-----------------|------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Project Name:   | PLU CVX JV #005H | <div style="text-align: center;">Turn Around</div> <div style="text-align: center;">ANALYSIS REQUEST</div> | <div style="text-align: center;">Work Order Notes</div> |
| Project Number: | 12918093         |                                                                                                            |                                                         |
| P.O. Number:    | ZRP-2625         |                                                                                                            |                                                         |
| Sampler's Name: | Martin Willis    |                                                                                                            |                                                         |
|                 |                  |                                                                                                            |                                                         |

| SAMPLE RECEIPT        |                                         |                    |                                         |
|-----------------------|-----------------------------------------|--------------------|-----------------------------------------|
| Temp Blank:           | Yes <input checked="" type="radio"/> No | Wet Ice:           | Yes <input checked="" type="radio"/> No |
| Temperature (°C):     | Thermometer ID: <u>12</u>               |                    |                                         |
| Received Intact:      | Yes <input checked="" type="radio"/> No |                    |                                         |
| Cooler Custody Seals: | Yes <input checked="" type="radio"/> No | Correction Factor: | <u>-0.1</u>                             |
| Sample Custody Seals: | Yes <input checked="" type="radio"/> No | Total Containers:  |                                         |

Number of Containers

A 8015)

PA 8021)

(EPA 300.0)

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

[illegible]

**Total 200.7 / 6010      200.8 / 6020:**

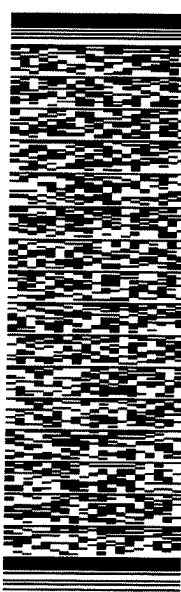
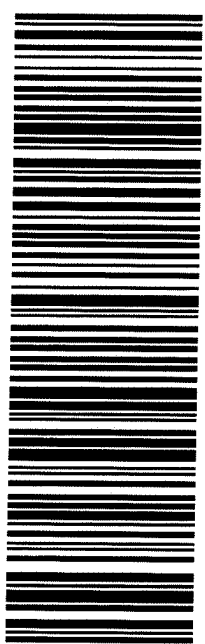
8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Ti Sn U V Zr  
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245-1 / 7470 / 7

1631 / 245.1 / 7470 / 7471 : Hc

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

| Relinquished by: (Signature)                                                      | Received by: (Signature)                                                          | Date/Time | Relinquished by: (Signature)                                                       | Received by: (Signature)                                                            | Date/Time |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
|  |  | 21/5/19   |  |  | 21/5/19   |
|                                                                                   |                                                                                   |           |                                                                                    |                                                                                     | 0703      |
|                                                                                   |                                                                                   |           |                                                                                    |                                                                                     |           |
|                                                                                   |                                                                                   |           |                                                                                    |                                                                                     |           |
|                                                                                   |                                                                                   |           |                                                                                    |                                                                                     |           |



|                                                                                                                            |                                                                  |                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ORIGIN ID:CAOA (575) 887-6245<br>XENCO SATURDAY<br>PAC N MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US |                                                                  | SHIP DATE: 15FEB19<br>ACTWGT: 74.00 LB<br>CAD: 101813706INET4100<br>DIMS: 25x15x15 IN |
| TO HOLD FOR XENCO                                                                                                          |                                                                  | BILL RECIPIENT                                                                        |
| 200 W INTERSTATE 20<br>MIDLAND TX 79701<br>(806) 674-0639<br>INV: REF: XENCO<br>PO: DEPT:                                  |                                                                  |                                                                                       |
| 565J20E3D/23AD                                                                                                             |                                                                  |                                                                                       |
|                                          |                                                                  |                                                                                       |
|                                          |                                                                  |                                                                                       |
| TRK# 7744 8732 2463<br>0201                                                                                                | SATURDAY HOLD<br>PRIORITY OVERNIGHT<br>HLD<br>79701<br>TX-US LBB | 41 MAFA                                                                               |
|                                           |                                                                  |                                                                                       |

**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](http://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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



Client: LT Environmental, Inc.

Date/ Time Received: 02/18/2019 07:33:00 AM

Work Order #: 614847

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/18/2019

# Analytical Report 614848

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**26-FEB-19**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



26-FEB-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **614848**

**PLU CVX JV #005H**

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) 614848. 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. 614848 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 614848

LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW01      | S      | 02-12-19 14:00 | 1            | 614848-001    |
| SW02      | S      | 02-12-19 14:10 | 1            | 614848-002    |
| SW03      | S      | 02-12-19 14:15 | 1            | 614848-003    |
| SW04      | S      | 02-12-19 14:03 | 1            | 614848-004    |
| FS01      | S      | 02-12-19 14:20 | 1            | 614848-005    |
| FS02      | S      | 02-12-19 14:25 | 1            | 614848-006    |





## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093  
Work Order Number(s): 614848

Report Date: 26-FEB-19  
Date Received: 02/18/2019

---

**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3080170 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 614848

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Mon Feb-18-19 07:33 am  
**Report Date:** 26-FEB-19  
**Project Manager:** Jessica Kramer

| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 614848-001       | 614848-002       | 614848-003       | 614848-004      | 614848-005       | 614848-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|-----------------|------------------|------------------|
|                                    | <b>Field Id:</b>  | SW01             | SW02             | SW03             | SW04            | FS01             | FS02             |
|                                    | <b>Depth:</b>     | 1-               | 1-               | 1-               | 1-              | 1-               | 1-               |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL            | SOIL             | SOIL             |
|                                    | <b>Sampled:</b>   | Feb-12-19 14:00  | Feb-12-19 14:10  | Feb-12-19 14:15  | Feb-12-19 14:03 | Feb-12-19 14:20  | Feb-12-19 14:25  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00 | Feb-21-19 15:00  | Feb-21-19 15:00  |
|                                    | <b>Analyzed:</b>  | Feb-22-19 15:34  | Feb-22-19 15:53  | Feb-22-19 16:12  | Feb-22-19 17:47 | Feb-22-19 16:31  | Feb-22-19 16:50  |
|                                    | <b>Units/RL:</b>  | 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 | 0.0830 0.0101   | <0.00200 0.00200 | <0.00200 0.00200 |
| Toluene                            |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | 0.159 0.0101    | <0.00200 0.00200 | <0.00200 0.00200 |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | 0.0526 0.0101   | <0.00200 0.00200 | <0.00200 0.00200 |
| m,p-Xylenes                        |                   | <0.00399 0.00399 | <0.00402 0.00402 | <0.00398 0.00398 | 0.111 0.0202    | <0.00399 0.00399 | <0.00401 0.00401 |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | 0.378 0.0101    | <0.00200 0.00200 | <0.00200 0.00200 |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | 0.489 0.0101    | <0.00200 0.00200 | <0.00200 0.00200 |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | 0.784 0.0101    | <0.00200 0.00200 | <0.00200 0.00200 |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b> | Feb-19-19 13:50  | Feb-19-19 13:50  | Feb-19-19 09:30  | Feb-19-19 09:30 | Feb-19-19 09:30  | Feb-19-19 09:30  |
|                                    | <b>Analyzed:</b>  | Feb-20-19 01:04  | Feb-20-19 01:10  | Feb-19-19 12:38  | Feb-19-19 12:44 | Feb-19-19 12:50  | Feb-19-19 12:57  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL        | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 1030 4.99        | 563 4.99         | 971 24.9         | 3450 25.1       | 551 4.99         | 610 4.95         |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00  | Feb-18-19 10:00 | Feb-18-19 10:00  | Feb-18-19 10:00  |
|                                    | <b>Analyzed:</b>  | Feb-18-19 18:18  | Feb-18-19 18:37  | Feb-18-19 18:57  | Feb-18-19 19:17 | Feb-18-19 19:36  | Feb-18-19 19:56  |
|                                    | <b>Units/RL:</b>  | 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       | 214 15.0        | <15.0 15.0       | <14.9 14.9       |
| Diesel Range Organics (DRO)        |                   | 44.1 15.0        | 30.0 15.0        | 88.8 15.0        | 1850 15.0       | 63.2 15.0        | 24.6 14.9        |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | 20.4 15.0        | 360 15.0        | <15.0 15.0       | <14.9 14.9       |
| Total TPH                          |                   | 44.1 15.0        | 30.0 15.0        | 109 15.0         | 2420 15.0       | 63.2 15.0        | 24.6 14.9        |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW01** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614848-001 Date Collected: 02.12.19 14.00 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 13.50 Basis: Wet Weight  
 Seq Number: 3079750

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1030   | 4.99 | mg/kg | 02.20.19 01.04 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 18.18 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 44.1   | 15.0 | mg/kg | 02.18.19 18.18 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 18.18 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | 44.1   | 15.0 | mg/kg | 02.18.19 18.18 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 112        | %     | 70-135 | 02.18.19 18.18 |      |
| o-Terphenyl    | 84-15-1    | 111        | %     | 70-135 | 02.18.19 18.18 |      |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW01**  
Lab Sample Id: 614848-001

Matrix: Soil  
Date Collected: 02.12.19 14.00

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080170

Date Prep: 02.21.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 15.34       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 128               | %            | 70-130        | 02.22.19 15.34       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 108               | %            | 70-130        | 02.22.19 15.34       |             |     |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW02**  
Lab Sample Id: 614848-002

Matrix: Soil  
Date Collected: 02.12.19 14.10

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079750

Date Prep: 02.19.19 13.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 563    | 4.99 | mg/kg | 02.20.19 01.10 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 18.37 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>30.0</b> | 15.0 | mg/kg | 02.18.19 18.37 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 18.37 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>30.0</b> | 15.0 | mg/kg | 02.18.19 18.37 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 110        | %     | 70-135 | 02.18.19 18.37 |      |
| o-Terphenyl    | 84-15-1    | 108        | %     | 70-135 | 02.18.19 18.37 |      |





# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW02**  
Lab Sample Id: 614848-002

Matrix: Soil  
Date Collected: 02.12.19 14.10

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080170

Date Prep: 02.21.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 15.53       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 15.53       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 112               | %            | 70-130        | 02.22.19 15.53       |             |     |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW03**  
Lab Sample Id: 614848-003

Matrix: Soil  
Date Collected: 02.12.19 14.15

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079654

Date Prep: 02.19.19 09.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 971    | 24.9 | mg/kg | 02.19.19 12.38 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 18.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 88.8   | 15.0 | mg/kg | 02.18.19 18.57 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 20.4   | 15.0 | mg/kg | 02.18.19 18.57 |      | 1   |
| Total TPH                          | PHC635     | 109    | 15.0 | mg/kg | 02.18.19 18.57 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 111        | %     | 70-135 | 02.18.19 18.57 |      |
| o-Terphenyl    | 84-15-1    | 109        | %     | 70-135 | 02.18.19 18.57 |      |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW03**  
Lab Sample Id: 614848-003

Matrix: Soil  
Date Collected: 02.12.19 14.15

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 16.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 115               | %            | 70-130        | 02.22.19 16.12       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.22.19 16.12       |             |     |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW04**  
Lab Sample Id: 614848-004

Matrix: Soil  
Date Collected: 02.12.19 14.03

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079654

Date Prep: 02.19.19 09.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 3450   | 25.1 | mg/kg | 02.19.19 12.44 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | 214    | 15.0 | mg/kg | 02.18.19 19.17 |      | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 1850   | 15.0 | mg/kg | 02.18.19 19.17 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 360    | 15.0 | mg/kg | 02.18.19 19.17 |      | 1   |
| Total TPH                          | PHC635     | 2420   | 15.0 | mg/kg | 02.18.19 19.17 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 112        | %     | 70-135 | 02.18.19 19.17 |      |
| o-Terphenyl    | 84-15-1    | 127        | %     | 70-135 | 02.18.19 19.17 |      |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW04**  
Lab Sample Id: 614848-004

Matrix: Soil  
Date Collected: 02.12.19 14.03

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| <b>Benzene</b>       | 71-43-2           | <b>0.0830</b>     | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>Toluene</b>       | 108-88-3          | <b>0.159</b>      | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>Ethylbenzene</b>  | 100-41-4          | <b>0.0526</b>     | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>m,p-Xylenes</b>   | 179601-23-1       | <b>0.111</b>      | 0.0202       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>o-Xylene</b>      | 95-47-6           | <b>0.378</b>      | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>Total Xylenes</b> | 1330-20-7         | <b>0.489</b>      | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>Total BTEX</b>    |                   | <b>0.784</b>      | 0.0101       | mg/kg         | 02.22.19 17.47       |             | 5   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 120               | %            | 70-130        | 02.22.19 17.47       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 70                | %            | 70-130        | 02.22.19 17.47       |             |     |





# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS01** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614848-005 Date Collected: 02.12.19 14.20 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.30 Basis: Wet Weight  
 Seq Number: 3079654

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 551    | 4.99 | mg/kg | 02.19.19 12.50 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 02.18.19 19.36 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>63.2</b> | 15.0 | mg/kg | 02.18.19 19.36 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 02.18.19 19.36 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>63.2</b> | 15.0 | mg/kg | 02.18.19 19.36 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 111        | %     | 70-135 | 02.18.19 19.36 |      |
| o-Terphenyl    | 84-15-1    | 111        | %     | 70-135 | 02.18.19 19.36 |      |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS01**  
Lab Sample Id: 614848-005

Matrix: Soil  
Date Collected: 02.12.19 14.20

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.31       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.22.19 16.31       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 122               | %            | 70-130        | 02.22.19 16.31       |             |     |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS02** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614848-006 Date Collected: 02.12.19 14.25 Sample Depth: 1  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.30 Basis: Wet Weight  
 Seq Number: 3079654

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 610    | 4.95 | mg/kg | 02.19.19 12.57 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 10.00 Basis: Wet Weight  
 Seq Number: 3079620

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9       | 14.9 | mg/kg | 02.18.19 19.56 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>24.6</b> | 14.9 | mg/kg | 02.18.19 19.56 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9       | 14.9 | mg/kg | 02.18.19 19.56 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>24.6</b> | 14.9 | mg/kg | 02.18.19 19.56 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 02.18.19 19.56 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 02.18.19 19.56 |      |



# Certificate of Analytical Results 614848



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS02**  
Lab Sample Id: 614848-006

Matrix: Soil  
Date Collected: 02.12.19 14.25

Date Received: 02.18.19 07.33  
Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 16.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 16.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 115               | %            | 70-130        | 02.22.19 16.50       |             |     |



## 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





## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

MB Sample Id: 7672053-1-BLK

Matrix: Solid

LCS Sample Id: 7672053-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672053-1-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          | 234        | 94       | 253         | 101       | 90-110 | 8    | 20        | mg/kg | 02.19.19 10:04 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

MB Sample Id: 7672095-1-BLK

Matrix: Solid

LCS Sample Id: 7672095-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672095-1-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          | 235        | 94       | 236         | 94        | 90-110 | 0    | 20        | mg/kg | 02.19.19 22:11 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

Parent Sample Id: 614870-008

Matrix: Soil

MS Sample Id: 614870-008 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614870-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 164           | 250          | 438       | 110     | 417        | 101      | 90-110 | 5    | 20        | mg/kg | 02.19.19 13:55 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

Parent Sample Id: 614952-002

Matrix: Soil

MS Sample Id: 614952-002 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614952-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 2160          | 252          | 3320      | 460     | 3440       | 508      | 90-110 | 4    | 20        | mg/kg | 02.19.19 10:22 | X    |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614846-004

Matrix: Soil

MS Sample Id: 614846-004 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614846-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 1140          | 248          | 1350      | 85      | 1360       | 89       | 90-110 | 1    | 20        | mg/kg | 02.19.19 23:59 | 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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079750

Parent Sample Id: 614851-005

Matrix: Soil

MS Sample Id: 614851-005 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614851-005 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 14.8          | 250          | 268       | 101     | 271        | 102      | 90-110 | 1    | 20        | mg/kg | 02.19.19 22:30 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

MB Sample Id: 7672046-1-BLK

Matrix: Solid

LCS Sample Id: 7672046-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.19

LCSD Sample Id: 7672046-1-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         | 832        | 83       | 969         | 97        | 70-135 | 15   | 20        | mg/kg | 02.18.19 12:26 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 922        | 92       | 1080        | 108       | 70-135 | 16   | 20        | mg/kg | 02.18.19 12:26 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 78      |         | 118      |          | 127       |           | 70-135 | %     | 02.18.19 12:26 |
| o-Terphenyl    | 79      |         | 111      |          | 111       |           | 70-135 | %     | 02.18.19 12:26 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

Parent Sample Id: 614846-001

Matrix: Soil

MS Sample Id: 614846-001 S

Prep Method: TX1005P

Date Prep: 02.18.19

MSD Sample Id: 614846-001 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          | 976       | 98      | 887        | 89       | 70-135 | 10   | 20        | mg/kg | 02.18.19 13:25 |      |
| Diesel Range Organics (DRO)       | 120           | 998          | 1150      | 103     | 1050       | 93       | 70-135 | 9    | 20        | mg/kg | 02.18.19 13:25 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 129      |          | 70-135 | %     | 02.18.19 13:25 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 02.18.19 13:25 |

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

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

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

MB Sample Id: 7672385-1-BLK

Matrix: Solid

LCS Sample Id: 7672385-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.19

LCSD Sample Id: 7672385-1-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       | 0.124      | 125      | 0.122       | 122       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Toluene      | <0.000453 | 0.0994       | 0.105      | 106      | 0.103       | 103       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Ethylbenzene | <0.000561 | 0.0994       | 0.0980     | 99       | 0.0960      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.194      | 97       | 0.190       | 95        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| o-Xylene     | <0.000342 | 0.0994       | 0.0977     | 98       | 0.0958      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 111      |          | 110       |           | 70-130 | %     | 02.22.19 12:10 |
| 4-Bromofluorobenzene | 95      |         | 100      |          | 100       |           | 70-130 | %     | 02.22.19 12:10 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

Parent Sample Id: 614847-004

Matrix: Soil

MS Sample Id: 614847-004 S

Prep Method: SW5030B

Date Prep: 02.21.19

MSD Sample Id: 614847-004 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000387     | 0.101        | 0.0715    | 71      | 0.0615     | 62       | 70-130 | 15   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Toluene      | <0.000458     | 0.101        | 0.0692    | 69      | 0.0587     | 59       | 70-130 | 16   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Ethylbenzene | <0.000568     | 0.101        | 0.0871    | 86      | 0.0771     | 77       | 70-130 | 12   | 35        | mg/kg | 02.22.19 12:48 |      |
| m,p-Xylenes  | <0.00102      | 0.201        | 0.153     | 76      | 0.145      | 73       | 70-130 | 5    | 35        | mg/kg | 02.22.19 12:48 |      |
| o-Xylene     | <0.000346     | 0.101        | 0.0846    | 84      | 0.0770     | 77       | 70-130 | 9    | 35        | mg/kg | 02.22.19 12:48 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 112     |         | 111      |          | 70-130 | %     | 02.22.19 12:48 |
| 4-Bromofluorobenzene | 105     |         | 107      |          | 70-130 | %     | 02.22.19 12:48 |

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

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

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

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



## Chain of Custody

Work Order No: 1614928

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 Littlell                      |
| 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 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Work Order Comments</b><br>Program: UST/ST <input type="checkbox"/> RP <input type="checkbox"/> Rowfields <input type="checkbox"/> C <input type="checkbox"/> perfund <input type="checkbox"/><br>State of Project:<br>Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/><br>Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|                 |                  |                                  |  |
|-----------------|------------------|----------------------------------|--|
| Project Name:   | PLU CVX JV #005H | Turn Around                      |  |
| Project Number: | 12918093         | Routine <input type="checkbox"/> |  |
| P.O. Number:    | 2RP-2625         | Rush:                            |  |
| Sampler's Name: | Martin Wills     | Due Date:                        |  |

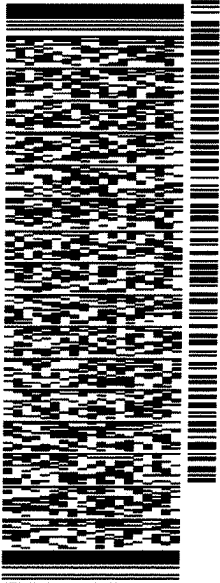
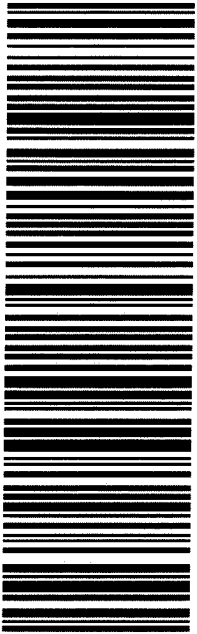
|                       |                                         |                                         |          |                                         |    |
|-----------------------|-----------------------------------------|-----------------------------------------|----------|-----------------------------------------|----|
| <b>SAMPLE RECEIPT</b> | Temp Blank:                             | Yes <input checked="" type="checkbox"/> | Wet Ice: | Yes <input checked="" type="checkbox"/> | No |
| Temperature (°C):     | 0.3004                                  | Thermometer ID:                         | 19       |                                         |    |
| Received Intact:      | Yes <input checked="" type="checkbox"/> | Correction Factor:                      | -0.1     |                                         |    |
| Cooler Custody Seals: | Yes <input checked="" type="checkbox"/> | Total Containers:                       |          |                                         |    |
| Sample Custody Seals: | Yes <input checked="" type="checkbox"/> |                                         |          |                                         |    |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|--------|--------------|--------------|-------|----------------------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                       |        |              |              |       | TPH (EPA 8015)       |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       |        |              |              |       | BTEX (EPA 8021)      |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       |        |              |              |       | Chloride (EPA 300.0) |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SW01                  | S      | 2/12/2019    | 1400         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SW02                  | S      | 2/12/2019    | 1410         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SW03                  | S      | 2/12/2019    | 1415         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SW04                  | S      | 2/12/2019    | 1403         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FS01                  | S      | 2/12/2019    | 1420         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FS02                  | S      | 2/12/2019    | 1425         | 1     | X                    | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Total 200.7 / 6010 200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti 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 Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |           |                              |                          |           |
|------------------------------|--------------------------|-----------|------------------------------|--------------------------|-----------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|                              |                          | 2/12/2019 |                              |                          | 2/12/19   |
|                              |                          |           |                              |                          | 0733      |

|                                                                                                                            |                                                                  |                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| ORIGIN ID:CAOA (575) 887-6245<br>XENCO SATURDAY<br>PAC N MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US |                                                                  | SHIP DATE: 15FEB19<br>ACTWGT: 74.00 LB<br>CAD: 101813706/NET4100<br>DIMS: 25x15x15 IN<br>BILL RECIPIENT |
| <b>TO HOLD FOR XENCO</b>                                                                                                   |                                                                  |                                                                                                         |
| 200 W INTERSTATE 20<br>MIDLAND TX 79701<br>(806) 674-0639<br>INV. REF: XENCO<br>PO. DEPT.                                  |                                                                  |                                                                                                         |
|                                          |                                                                  |                                                                                                         |
|                                          |                                                                  |                                                                                                         |
| 565J210E3D/23AD                                                                                                            |                                                                  |                                                                                                         |
| TRK# 7744 8732 2463<br>0201                                                                                                | SATURDAY HOLD<br>PRIORITY OVERNIGHT<br>HLD<br>TX-US LBB<br>79701 | 41 MAFA                                                                                                 |
|                                           |                                                                  |                                                                                                         |

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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](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/18/2019 07:33:00 AM

Work Order #: 614848

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

**Sample Receipt Checklist****Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/18/2019

# Analytical Report 614849

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**26-FEB-19**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



26-FEB-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **614849**

**PLU CVX JV #005H**

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) 614849. 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. 614849 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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**Sample Cross Reference 614849****LT Environmental, Inc., Arvada, CO**

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS23      | S      | 02-11-19 09:00 | 2            | 614849-001    |
| SS23A     | S      | 02-11-19 09:20 | 4            | 614849-002    |
| SS12A     | S      | 02-11-19 10:05 | 2            | 614849-003    |
| SS12B     | S      | 02-11-19 10:05 | 4            | 614849-004    |
| SS25      | S      | 02-11-19 11:10 | 2            | 614849-005    |
| SS25A     | S      | 02-11-19 11:15 | 4            | 614849-006    |
| SS27      | S      | 02-11-19 12:25 | 2            | 614849-007    |
| SS27A     | S      | 02-11-19 12:27 | 4            | 614849-008    |
| SS10A     | S      | 02-11-19 13:31 | 2            | 614849-009    |
| SS10B     | S      | 02-11-19 13:35 | 4            | 614849-010    |
| SS24      | S      | 02-11-19 15:30 | 2            | 614849-011    |
| SS24A     | S      | 02-11-19 15:35 | 4            | 614849-012    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093

Work Order Number(s): 614849

Report Date: 26-FEB-19

Date Received: 02/18/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3080170 BTEX by EPA 8021B

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





# Certificate of Analysis Summary 614849

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Mon Feb-18-19 07:33 am  
**Report Date:** 26-FEB-19  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 614849-001       | 614849-002       | 614849-003       | 614849-004       | 614849-005       | 614849-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SS23             | SS23A            | SS12A            | SS12B            | SS25             | SS25A            |
|                                    | <i>Depth:</i>     | 2-               | 4-               | 2-               | 4-               | 2-               | 4-               |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Feb-11-19 09:00  | Feb-11-19 09:20  | Feb-11-19 10:05  | Feb-11-19 10:05  | Feb-11-19 11:10  | Feb-11-19 11:15  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  |
|                                    | <i>Analyzed:</i>  | Feb-22-19 17:09  | Feb-22-19 17:28  | Feb-22-19 19:02  | Feb-22-19 19:21  | Feb-22-19 19:40  | Feb-22-19 19:59  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00400 0.00400 | <0.00402 0.00402 | <0.00398 0.00398 | <0.00400 0.00400 | <0.00399 0.00399 |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Feb-19-19 09:30  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  |
|                                    | <i>Analyzed:</i>  | Feb-19-19 13:03  | Feb-19-19 14:48  | Feb-19-19 15:17  | Feb-19-19 15:57  | Feb-19-19 16:03  | Feb-19-19 16:10  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 265 4.95         | 236 5.00         | 157 5.00         | 217 4.99         | 17.1 4.99        | 18.5 4.97        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-20-19 13:00  | Feb-20-19 13:00  | Feb-20-19 13:00  | Feb-20-19 13:00  | Feb-20-19 13:00  | Feb-20-19 13:00  |
|                                    | <i>Analyzed:</i>  | Feb-20-19 15:39  | Feb-20-19 16:38  | Feb-20-19 16:58  | Feb-20-19 17:18  | Feb-20-19 17:37  | Feb-20-19 17:57  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 614849

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Mon Feb-18-19 07:33 am  
**Report Date:** 26-FEB-19  
**Project Manager:** Jessica Kramer

| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 614849-007       | 614849-008       | 614849-009       | 614849-010       | 614849-011       | 614849-012       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <b>Field Id:</b>  | SS27             | SS27A            | SS10A            | SS10B            | SS24             | SS24A            |
|                                    | <b>Depth:</b>     | 2-               | 4-               | 2-               | 4-               | 2-               | 4-               |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <b>Sampled:</b>   | Feb-11-19 12:25  | Feb-11-19 12:27  | Feb-11-19 13:31  | Feb-11-19 13:35  | Feb-11-19 15:30  | Feb-11-19 15:35  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  | Feb-21-19 15:00  |
|                                    | <b>Analyzed:</b>  | Feb-22-19 20:18  | Feb-22-19 20:37  | Feb-22-19 20:56  | Feb-22-19 21:15  | Feb-22-19 21:34  | Feb-22-19 21:53  |
|                                    | <b>Units/RL:</b>  | 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 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| Toluene                            |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00398 0.00398 | <0.00402 0.00402 | <0.00399 0.00399 | <0.00401 0.00401 | <0.00398 0.00398 |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| Total Xylenes                      |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b> | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  | Feb-19-19 09:50  |
|                                    | <b>Analyzed:</b>  | Feb-19-19 17:14  | Feb-19-19 17:21  | Feb-19-19 17:27  | Feb-19-19 16:16  | Feb-19-19 16:22  | Feb-19-19 16:47  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 25.7 4.99        | 23.9 4.95        | 202 4.98         | 143 4.98         | 564 5.00         | 1080 24.8        |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Feb-20-19 13:00  | Feb-20-19 13:00  | Feb-18-19 15:00  | Feb-18-19 15:00  | Feb-18-19 10:00  | Feb-18-19 10:00  |
|                                    | <b>Analyzed:</b>  | Feb-20-19 18:17  | Feb-20-19 18:37  | Feb-19-19 05:31  | Feb-19-19 05:50  | Feb-18-19 20:15  | Feb-18-19 20:35  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <14.9 14.9       | <15.0 15.0       |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | 38.2 14.9        | 80.1 15.0        |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <14.9 14.9       | <15.0 15.0       |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | 38.2 14.9        | 80.1 15.0        |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS23 Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614849-001 Date Collected: 02.11.19 09.00 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.30 Basis: Wet Weight  
 Seq Number: 3079654

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 265    | 4.95 | mg/kg | 02.19.19 13.03 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.20.19 13.00 Basis: Wet Weight  
 Seq Number: 3079924

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 15.39 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 15.39 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 15.39 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 15.39 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.20.19 15.39 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 02.20.19 15.39 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS23  
Lab Sample Id: 614849-001

Matrix: Soil  
Date Collected: 02.11.19 09.00

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 17.09       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.22.19 17.09       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 118               | %            | 70-130        | 02.22.19 17.09       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS23A**  
Lab Sample Id: 614849-002

Matrix: Soil  
Date Collected: 02.11.19 09.20

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 236    | 5.00 | mg/kg | 02.19.19 14.48 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079924

Date Prep: 02.20.19 13.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 16.38 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 16.38 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 16.38 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 16.38 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 02.20.19 16.38 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 02.20.19 16.38 |      |





# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS23A**  
Lab Sample Id: 614849-002

Matrix: Soil  
Date Collected: 02.11.19 09.20

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 17.28       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 118               | %            | 70-130        | 02.22.19 17.28       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 17.28       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS12A**  
Lab Sample Id: 614849-003

Matrix: Soil  
Date Collected: 02.11.19 10.05

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 157    | 5.00 | mg/kg | 02.19.19 15.17 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079924

Date Prep: 02.20.19 13.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 16.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 16.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 16.58 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 16.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 02.20.19 16.58 |      |
| o-Terphenyl    | 84-15-1    | 90         | %     | 70-135 | 02.20.19 16.58 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS12A**  
Lab Sample Id: 614849-003

Matrix: Soil  
Date Collected: 02.11.19 10.05

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 19.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 02.22.19 19.02       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.22.19 19.02       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS12B**  
Lab Sample Id: 614849-004

Matrix: Soil  
Date Collected: 02.11.19 10.05

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 217    | 4.99 | mg/kg | 02.19.19 15.57 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079924

Date Prep: 02.20.19 13.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 17.18 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 17.18 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 17.18 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 17.18 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 02.20.19 17.18 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 02.20.19 17.18 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS12B**  
Lab Sample Id: 614849-004

Matrix: Soil  
Date Collected: 02.11.19 10.05

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 19.21       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 02.22.19 19.21       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 117               | %            | 70-130        | 02.22.19 19.21       |             |     |





# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS25 Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614849-005 Date Collected: 02.11.19 11.10 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.50 Basis: Wet Weight  
 Seq Number: 3079738

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 17.1   | 4.99 | mg/kg | 02.19.19 16.03 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.20.19 13.00 Basis: Wet Weight  
 Seq Number: 3079924

| Parameter                          | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|------------------------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610            | <15.0             | 15.0         | mg/kg         | 02.20.19 17.37       | U           | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO         | <15.0             | 15.0         | mg/kg         | 02.20.19 17.37       | U           | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835          | <15.0             | 15.0         | mg/kg         | 02.20.19 17.37       | U           | 1   |
| Total TPH                          | PHC635            | <15.0             | 15.0         | mg/kg         | 02.20.19 17.37       | U           | 1   |
| <b>Surrogate</b>                   | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1-Chlorooctane                     | 111-85-3          | 92                | %            | 70-135        | 02.20.19 17.37       |             |     |
| o-Terphenyl                        | 84-15-1           | 87                | %            | 70-135        | 02.20.19 17.37       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS25  
Lab Sample Id: 614849-005

Matrix: Soil  
Date Collected: 02.11.19 11.10

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.40       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 117               | %            | 70-130        | 02.22.19 19.40       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 02.22.19 19.40       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS25A** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614849-006 Date Collected: 02.11.19 11.15 Sample Depth: 4  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.50 Basis: Wet Weight  
 Seq Number: 3079738

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 18.5   | 4.97 | mg/kg | 02.19.19 16.10 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.20.19 13.00 Basis: Wet Weight  
 Seq Number: 3079924

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 17.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 17.57 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 17.57 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 17.57 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.20.19 17.57 |      |
| o-Terphenyl    | 84-15-1    | 92         | %     | 70-135 | 02.20.19 17.57 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS25A**  
Lab Sample Id: 614849-006

Matrix: Soil  
Date Collected: 02.11.19 11.15

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 19.59       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 113               | %            | 70-130        | 02.22.19 19.59       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 19.59       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS27 Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614849-007 Date Collected: 02.11.19 12.25 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.50 Basis: Wet Weight  
 Seq Number: 3079738

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 25.7   | 4.99 | mg/kg | 02.19.19 17.14 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.20.19 13.00 Basis: Wet Weight  
 Seq Number: 3079924

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 18.17 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 18.17 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 18.17 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 18.17 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 02.20.19 18.17 |      |
| o-Terphenyl    | 84-15-1    | 88         | %     | 70-135 | 02.20.19 18.17 |      |





# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS27  
Lab Sample Id: 614849-007

Matrix: Soil  
Date Collected: 02.11.19 12.25

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.18       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 20.18       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 02.22.19 20.18       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS27A**  
Lab Sample Id: 614849-008

Matrix: Soil  
Date Collected: 02.11.19 12.27

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 23.9   | 4.95 | mg/kg | 02.19.19 17.21 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079924

Date Prep: 02.20.19 13.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.20.19 18.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.20.19 18.37 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.20.19 18.37 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.20.19 18.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 02.20.19 18.37 |      |
| o-Terphenyl    | 84-15-1    | 89         | %     | 70-135 | 02.20.19 18.37 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS27A**  
Lab Sample Id: 614849-008

Matrix: Soil  
Date Collected: 02.11.19 12.27

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080170

Date Prep: 02.21.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 20.37       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 112               | %            | 70-130        | 02.22.19 20.37       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 20.37       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS10A** Matrix: Soil Date Received: 02.18.19 07.33  
 Lab Sample Id: 614849-009 Date Collected: 02.11.19 13.31 Sample Depth: 2  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.19.19 09.50 Basis: Wet Weight  
 Seq Number: 3079738

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 202    | 4.98 | mg/kg | 02.19.19 17.27 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 02.18.19 15.00 Basis: Wet Weight  
 Seq Number: 3079622

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.19.19 05.31 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 02.19.19 05.31 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.19.19 05.31 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 02.19.19 05.31 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 89         | %     | 70-135 | 02.19.19 05.31 |      |
| o-Terphenyl    | 84-15-1    | 86         | %     | 70-135 | 02.19.19 05.31 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS10A**  
Lab Sample Id: 614849-009

Matrix: Soil  
Date Collected: 02.11.19 13.31

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3080170

Date Prep: 02.21.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.22.19 20.56       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 02.22.19 20.56       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.22.19 20.56       |             |     |





# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS10B**  
Lab Sample Id: 614849-010

Matrix: Soil  
Date Collected: 02.11.19 13.35

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 143    | 4.98 | mg/kg | 02.19.19 16.16 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079622

Date Prep: 02.18.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 02.19.19 05.50 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 02.19.19 05.50 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 02.19.19 05.50 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 02.19.19 05.50 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 02.19.19 05.50 |      |
| o-Terphenyl    | 84-15-1    | 89         | %     | 70-135 | 02.19.19 05.50 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS10B**  
Lab Sample Id: 614849-010

Matrix: Soil  
Date Collected: 02.11.19 13.35

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.15       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 114               | %            | 70-130        | 02.22.19 21.15       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.22.19 21.15       |             |     |



## Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: SS24  
Lab Sample Id: 614849-011

Matrix: Soil  
Date Collected: 02.11.19 15.30

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.19.19 09.50

Basis: Wet Weight

Seq Number: 3079738

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 564    | 5.00 | mg/kg | 02.19.19 16.22 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 02.18.19 10.00

Basis: Wet Weight

Seq Number: 3079620

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 02.18.19 20.15 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 38.2   | 14.9 | mg/kg | 02.18.19 20.15 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 02.18.19 20.15 | U    | 1   |
| Total TPH                          | PHC635     | 38.2   | 14.9 | mg/kg | 02.18.19 20.15 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.18.19 20.15 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 02.18.19 20.15 |      |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS24**  
Lab Sample Id: 614849-011

Matrix: Soil  
Date Collected: 02.11.19 15.30

Date Received: 02.18.19 07.33  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.22.19 21.34       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 21.34       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 119               | %            | 70-130        | 02.22.19 21.34       |             |     |



# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS24A**  
Lab Sample Id: 614849-012

Matrix: Soil  
Date Collected: 02.11.19 15.35

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079738

Date Prep: 02.19.19 09.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1080   | 24.8 | mg/kg | 02.19.19 16.47 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079620

Date Prep: 02.18.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 02.18.19 20.35 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 80.1   | 15.0 | mg/kg | 02.18.19 20.35 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 02.18.19 20.35 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | 80.1   | 15.0 | mg/kg | 02.18.19 20.35 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.18.19 20.35 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 02.18.19 20.35 |      |





# Certificate of Analytical Results 614849



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SS24A**  
Lab Sample Id: 614849-012

Matrix: Soil  
Date Collected: 02.11.19 15.35

Date Received: 02.18.19 07.33  
Sample Depth: 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.21.19 15.00

Basis: Wet Weight

Seq Number: 3080170

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.22.19 21.53       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 119               | %            | 70-130        | 02.22.19 21.53       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 02.22.19 21.53       |             |     |



## 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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

MB Sample Id: 7672053-1-BLK

Matrix: Solid

LCS Sample Id: 7672053-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672053-1-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          | 234        | 94       | 253         | 101       | 90-110 | 8    | 20        | mg/kg | 02.19.19 10:04 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079738

MB Sample Id: 7672054-1-BLK

Matrix: Solid

LCS Sample Id: 7672054-1-BKS

Prep Method: E300P

Date Prep: 02.19.19

LCSD Sample Id: 7672054-1-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          | 234        | 94       | 253         | 101       | 90-110 | 8    | 20        | mg/kg | 02.19.19 10:04 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

Parent Sample Id: 614870-008

Matrix: Soil

MS Sample Id: 614870-008 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614870-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 164           | 250          | 438       | 110     | 417        | 101      | 90-110 | 5    | 20        | mg/kg | 02.19.19 13:55 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079654

Parent Sample Id: 614952-002

Matrix: Soil

MS Sample Id: 614952-002 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614952-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 2160          | 252          | 3320      | 460     | 3440       | 508      | 90-110 | 4    | 20        | mg/kg | 02.19.19 10:22 | X    |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079738

Parent Sample Id: 614844-001

Matrix: Soil

MS Sample Id: 614844-001 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614844-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 29.4          | 250          | 285       | 102     | 297        | 107      | 90-110 | 4    | 20        | mg/kg | 02.19.19 16:34 |      |

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

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

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079738

Parent Sample Id: 614849-002

Matrix: Soil

MS Sample Id: 614849-002 S

Prep Method: E300P

Date Prep: 02.19.19

MSD Sample Id: 614849-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 236           | 250          | 477       | 96      | 496        | 104      | 90-110 | 4    | 20        | mg/kg | 02.19.19 14:54 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

MB Sample Id: 7672046-1-BLK

Matrix: Solid

LCS Sample Id: 7672046-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.19

LCSD Sample Id: 7672046-1-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         | 832        | 83       | 969         | 97        | 70-135 | 15   | 20        | mg/kg | 02.18.19 12:26 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 922        | 92       | 1080        | 108       | 70-135 | 16   | 20        | mg/kg | 02.18.19 12:26 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 78      |         | 118      |          | 127       |           | 70-135 | %     | 02.18.19 12:26 |
| o-Terphenyl    | 79      |         | 111      |          | 111       |           | 70-135 | %     | 02.18.19 12:26 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079622

MB Sample Id: 7672047-1-BLK

Matrix: Solid

LCS Sample Id: 7672047-1-BKS

Prep Method: TX1005P

Date Prep: 02.18.19

LCSD Sample Id: 7672047-1-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         | 1020       | 102      | 872         | 87        | 70-135 | 16   | 20        | mg/kg | 02.18.19 21:34 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 1170       | 117      | 979         | 98        | 70-135 | 18   | 20        | mg/kg | 02.18.19 21:34 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 79      |         | 125      |          | 122       |           | 70-135 | %     | 02.18.19 21:34 |
| o-Terphenyl    | 79      |         | 118      |          | 105       |           | 70-135 | %     | 02.18.19 21:34 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079924

MB Sample Id: 7672196-1-BLK

Matrix: Solid

LCS Sample Id: 7672196-1-BKS

Prep Method: TX1005P

Date Prep: 02.20.19

LCSD Sample Id: 7672196-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <8.00     | 1000         | 942        | 94       | 982         | 98        | 70-135 | 4    | 20        | mg/kg | 02.20.19 15:00 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 952        | 95       | 983         | 98        | 70-135 | 3    | 20        | mg/kg | 02.20.19 15:00 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 101     |         | 125      |          | 129       |           | 70-135 | %     | 02.20.19 15:00 |
| o-Terphenyl    | 101     |         | 121      |          | 124       |           | 70-135 | %     | 02.20.19 15:00 |

MS/MSD Percent Recovery  
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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079620

Parent Sample Id: 614846-001

Matrix: Soil

MS Sample Id: 614846-001 S

Prep Method: TX1005P

Date Prep: 02.18.19

MSD Sample Id: 614846-001 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          | 976       | 98      | 887        | 89       | 70-135 | 10   | 20        | mg/kg | 02.18.19 13:25 |      |
| Diesel Range Organics (DRO)       | 120           | 998          | 1150      | 103     | 1050       | 93       | 70-135 | 9    | 20        | mg/kg | 02.18.19 13:25 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 129      |          | 70-135 | %     | 02.18.19 13:25 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 02.18.19 13:25 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079622

Parent Sample Id: 614869-001

Matrix: Soil

MS Sample Id: 614869-001 S

Prep Method: TX1005P

Date Prep: 02.18.19

MSD Sample Id: 614869-001 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          | 866       | 87      | 944        | 95       | 70-135 | 9    | 20        | mg/kg | 02.18.19 22:34 |      |
| Diesel Range Organics (DRO)       | 39.3          | 997          | 945       | 91      | 972        | 93       | 70-135 | 3    | 20        | mg/kg | 02.18.19 22:34 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 118     |         | 116      |          | 70-135 | %     | 02.18.19 22:34 |
| o-Terphenyl    | 101     |         | 102      |          | 70-135 | %     | 02.18.19 22:34 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3079924

Parent Sample Id: 614849-001

Matrix: Soil

MS Sample Id: 614849-001 S

Prep Method: TX1005P

Date Prep: 02.20.19

MSD Sample Id: 614849-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <8.00         | 1000         | 920       | 92      | 936        | 94       | 70-135 | 2    | 20        | mg/kg | 02.20.19 15:59 |      |
| Diesel Range Organics (DRO)       | <8.13         | 1000         | 946       | 95      | 963        | 96       | 70-135 | 2    | 20        | mg/kg | 02.20.19 15:59 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 125     |         | 125      |          | 70-135 | %     | 02.20.19 15:59 |
| o-Terphenyl    | 122     |         | 117      |          | 70-135 | %     | 02.20.19 15:59 |

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. =  $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

MB Sample Id: 7672385-1-BLK

Matrix: Solid

LCS Sample Id: 7672385-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.19

LCSD Sample Id: 7672385-1-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       | 0.124      | 125      | 0.122       | 122       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Toluene      | <0.000453 | 0.0994       | 0.105      | 106      | 0.103       | 103       | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| Ethylbenzene | <0.000561 | 0.0994       | 0.0980     | 99       | 0.0960      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.194      | 97       | 0.190       | 95        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |
| o-Xylene     | <0.000342 | 0.0994       | 0.0977     | 98       | 0.0958      | 96        | 70-130 | 2    | 35        | mg/kg | 02.22.19 12:10 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 111      |          | 110       |           | 70-130 | %     | 02.22.19 12:10 |
| 4-Bromofluorobenzene | 95      |         | 100      |          | 100       |           | 70-130 | %     | 02.22.19 12:10 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3080170

Parent Sample Id: 614847-004

Matrix: Soil

MS Sample Id: 614847-004 S

Prep Method: SW5030B

Date Prep: 02.21.19

MSD Sample Id: 614847-004 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000387     | 0.101        | 0.0715    | 71      | 0.0615     | 62       | 70-130 | 15   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Toluene      | <0.000458     | 0.101        | 0.0692    | 69      | 0.0587     | 59       | 70-130 | 16   | 35        | mg/kg | 02.22.19 12:48 | X    |
| Ethylbenzene | <0.000568     | 0.101        | 0.0871    | 86      | 0.0771     | 77       | 70-130 | 12   | 35        | mg/kg | 02.22.19 12:48 |      |
| m,p-Xylenes  | <0.00102      | 0.201        | 0.153     | 76      | 0.145      | 73       | 70-130 | 5    | 35        | mg/kg | 02.22.19 12:48 |      |
| o-Xylene     | <0.000346     | 0.101        | 0.0846    | 84      | 0.0770     | 77       | 70-130 | 9    | 35        | mg/kg | 02.22.19 12:48 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 112     |         | 111      |          | 70-130 | %     | 02.22.19 12:48 |
| 4-Bromofluorobenzene | 105     |         | 107      |          | 70-130 | %     | 02.22.19 12:48 |

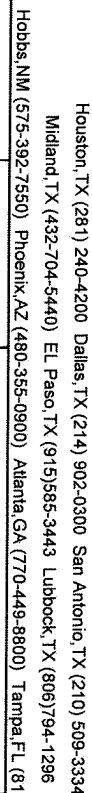
MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

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

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

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





## Chain of Custody

**Work Order No:**

১৬৭৪৭৭

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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 |

|                            |                                    |                                    |                                                                                        |
|----------------------------|------------------------------------|------------------------------------|----------------------------------------------------------------------------------------|
| <b>Work Order Comments</b> |                                    |                                    |                                                                                        |
| Program: UST/PST           | <input type="checkbox"/> RP        | <input type="checkbox"/> rowfields | F <input type="checkbox"/> C <input type="checkbox"/> perfund <input type="checkbox"/> |
| State of Project:          |                                    |                                    |                                                                                        |
| Reporting Level II         | <input type="checkbox"/> level III | <input type="checkbox"/> ST/UST    | <input type="checkbox"/> RP <input type="checkbox"/> level IV <input type="checkbox"/> |
| Deliverables: EDD          | <input type="checkbox"/>           | ADAPT                              | <input type="checkbox"/> Other:                                                        |

|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|---------------------------------------------------------------|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|------------------|--|
| Project Name:                                                 |  |  |  |  |  | PLU CVX JV #005H   |  |  |  |  |  |  | Turn Around        |  | Work Order Notes |  |
| Project Number:                                               |  |  |  |  |  | 12918093           |  |  |  |  |  |  | Routine            |  |                  |  |
| P.O. Number:                                                  |  |  |  |  |  | 2RP-2625           |  |  |  |  |  |  | Rush:              |  |                  |  |
| Sampler's Name:                                               |  |  |  |  |  | Martin Willis      |  |  |  |  |  |  | Due Date:          |  |                  |  |
| <b>SAMPLE RECEIPT</b>                                         |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
| Temperature (°C):                                             |  |  |  |  |  | Temp Blank: 0.30.2 |  |  |  |  |  |  | Yes No             |  | Wet Ice: Yes No  |  |
| Received Intact:                                              |  |  |  |  |  | Yes No             |  |  |  |  |  |  | Thermometer ID     |  |                  |  |
| Cooler Custody Seals:                                         |  |  |  |  |  | Yes No             |  |  |  |  |  |  | Correction Factor: |  | -0.1             |  |
| Sample Custody Seals:                                         |  |  |  |  |  | Yes No             |  |  |  |  |  |  | Total Containers:  |  |                  |  |
| Number of Containers                                          |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
| (EPA 8015)                                                    |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
| (EPA 8021)                                                    |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
| (EPA 300.0)                                                   |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
|                                                               |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |
| TAT starts the day received by the lab, if received by 4:30pm |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |                  |  |

[illegible]

| 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                  | SiO <sub>2</sub>    |
| Na                  | Sr                  | Ti                  |
| Sn                  | U                   | V                   |
| Zn                  |                     |                     |
| 8RCRA               | Sb                  | As                  |
| Ba                  | Be                  | B                   |
| Cd                  | Cr                  | Co                  |
| Cu                  | Pb                  | Mn                  |
| Mo                  | Ni                  | Se                  |
| Ag                  | Ti                  | U                   |
| 1631 / 245-1 / 7470 | 1631 / 245-1 / 7470 | 1631 / 245-1 / 7470 |

Notice: signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

| Relinquished by: (Signature)                                                      | Received by: (Signature)                                                          | Date/Time      | Relinquished by: (Signature)                                                       | Received by: (Signature)                                                            | Date/Time |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
|  |  | 7/15/19 @ 1232 |  |  | 7/18/19   |
|                                                                                   |                                                                                   |                |                                                                                    |                                                                                     | 0733      |
|                                                                                   |                                                                                   |                |                                                                                    |                                                                                     |           |
|                                                                                   |                                                                                   |                |                                                                                    |                                                                                     |           |
|                                                                                   |                                                                                   |                |                                                                                    |                                                                                     |           |



## Chain of Custody

**Work Order No.:**

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 508-3334  
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Phoenix, AZ (602) 955-3333 Atlanta, GA (770) 449-8800 Tampa, FL (813) 281-2222  
Hobbs, NM (505) 392-7550

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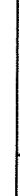
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|                         |                                        |                                |                                    |
|-------------------------|----------------------------------------|--------------------------------|------------------------------------|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

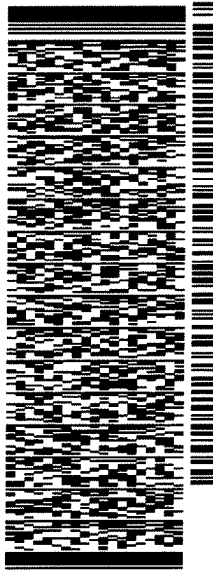
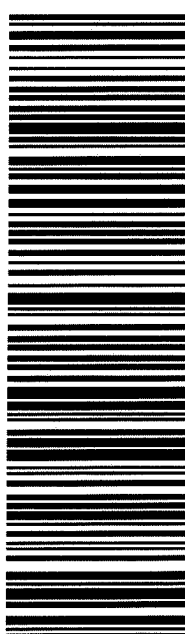
  

| <b>Work Order Comments</b> |                                    |                                      |                                       |                                   |                          |
|----------------------------|------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------|--------------------------|
| <b>Program:</b> UST/PST    | <input type="checkbox"/> RP        | <input type="checkbox"/> Brownfields | <input checked="" type="checkbox"/> C | <input type="checkbox"/> Deepfund | <input type="checkbox"/> |
| <b>State of Project:</b>   |                                    |                                      |                                       |                                   |                          |
| Reporting Level II         | <input type="checkbox"/> Level III | <input type="checkbox"/> ST/UST      | <input type="checkbox"/> RP           | <input type="checkbox"/> Level IV | <input type="checkbox"/> |
| Deliverables: EDD          | <input type="checkbox"/>           | ADAPT                                | <input type="checkbox"/>              | Other:                            |                          |

[illegible][illegible]

| Relinquished by: (Signature)                                                     | Received by: (Signature)                                                          | Date/Time | Relinquished by: (Signature)                                                      | Received by: (Signature)                                                          | Date/Time |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|
|  |  |           |  |  |           |
|                                                                                  |                                                                                   |           |                                                                                   |                                                                                   |           |
|                                                                                  |                                                                                   |           |                                                                                   |                                                                                   |           |
|                                                                                  |                                                                                   |           |                                                                                   |                                                                                   |           |
|                                                                                  |                                                                                   |           |                                                                                   |                                                                                   |           |

Revised Date 05/14/18 Rev. 20/18

|                                                                                                                            |  |                                                                                                         |  |
|----------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|--|
| ORIGIN ID:CAOA (5/5) 887-6245<br>XENCO SATURDAY<br>PAC N MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US |  | SHIP DATE: 15FEB19<br>ACTWGT: 74.00 LB<br>CAD: 101813706/NET4100<br>DIMS: 25x15x15 IN<br>BILL RECIPIENT |  |
| TO HOLD FOR XENCO                                                                                                          |  |                                                                                                         |  |
| 200 W INTERSTATE 20<br>MIDLAND TX 79701<br>(806) 674-0639<br>INV. REF: XENCO<br>PO. DEPT.                                  |  |                                                                                                         |  |
|                                          |  |                                                                                                         |  |
|                                          |  |                                                                                                         |  |
| TRK# 7744 8732 2463<br>0201                                                                                                |  | SATURDAY HOLD<br>PRIORITY OVERNIGHT<br>HLD<br>79701<br>TX-US LBB                                        |  |
|                                           |  |                                                                                                         |  |

565J20E3D123AD

**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](http://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.



Client: LT Environmental, Inc.

Date/ Time Received: 02/18/2019 07:33:00 AM

Work Order #: 614849

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/18/2019



# Analytical Report 615917

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**05-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)



05-MAR-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **615917**

**PLU CVX JV #005H**

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) 615917. 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. 615917 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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





## Sample Cross Reference 615917

LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| FS01      | S      | 02-19-19 11:35 | 2            | 615917-001    |
| SW01      | S      | 02-19-19 11:38 | 0 - 2        | 615917-002    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093

Work Order Number(s): 615917

Report Date: 05-MAR-19

Date Received: 02/27/2019

---

**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3081082 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 615917

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Wed Feb-27-19 11:25 am  
**Report Date:** 05-MAR-19  
**Project Manager:** Jessica Kramer

|                                    |                                    |                  |                  |  |  |  |  |
|------------------------------------|------------------------------------|------------------|------------------|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>                     | 615917-001       | 615917-002       |  |  |  |  |
|                                    | <b>Field Id:</b>                   | FS01             | SW01             |  |  |  |  |
|                                    | <b>Depth:</b>                      | 2-               | 0-2              |  |  |  |  |
|                                    | <b>Matrix:</b>                     | SOIL             | SOIL             |  |  |  |  |
|                                    | <b>Sampled:</b>                    | Feb-19-19 11:35  | Feb-19-19 11:38  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b>                  | Mar-04-19 15:00  | Mar-04-19 15:00  |  |  |  |  |
|                                    | <b>Analyzed:</b>                   | Mar-05-19 03:52  | Mar-05-19 02:36  |  |  |  |  |
|                                    | <b>Units/RL:</b>                   | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    | Benzene                            | <0.00200 0.00200 | <0.00202 0.00202 |  |  |  |  |
|                                    | Toluene                            | <0.00200 0.00200 | 0.00257 0.00202  |  |  |  |  |
|                                    | Ethylbenzene                       | 0.00261 0.00200  | <0.00202 0.00202 |  |  |  |  |
|                                    | m,p-Xylenes                        | 0.00402 0.00400  | <0.00403 0.00403 |  |  |  |  |
|                                    | o-Xylene                           | 0.00334 0.00200  | <0.00202 0.00202 |  |  |  |  |
|                                    | Total Xylenes                      | 0.00736 0.00200  | <0.00202 0.00202 |  |  |  |  |
|                                    | Total BTEX                         | 0.00997 0.00200  | 0.00257 0.00202  |  |  |  |  |
| <b>Inorganic Anions by EPA 300</b> | <b>Extracted:</b>                  | Mar-02-19 09:40  | Mar-02-19 09:40  |  |  |  |  |
|                                    | <b>Analyzed:</b>                   | Mar-02-19 19:32  | Mar-02-19 19:52  |  |  |  |  |
|                                    | <b>Units/RL:</b>                   | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                    | Chloride                           | <5.00 5.00       | <4.99 4.99       |  |  |  |  |
|                                    |                                    |                  |                  |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b>                  | Mar-01-19 09:00  | Mar-01-19 09:00  |  |  |  |  |
|                                    | <b>Analyzed:</b>                   | Mar-01-19 12:55  | Mar-01-19 13:53  |  |  |  |  |
|                                    | <b>Units/RL:</b>                   | 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       | 39.0 15.0        |  |  |  |  |
|                                    | Motor Oil Range Hydrocarbons (MRO) | <15.0 15.0       | <15.0 15.0       |  |  |  |  |
|                                    | Total TPH                          | <15.0 15.0       | 39.0 15.0        |  |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant



## Certificate of Analytical Results 615917



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS01**  
 Lab Sample Id: 615917-001

Matrix: Soil  
 Date Collected: 02.19.19 11.35

Date Received: 02.27.19 11.25  
 Sample Depth: 2

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081021

Date Prep: 03.02.19 09.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.00  | 5.00 | mg/kg | 03.02.19 19.32 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3080899

Date Prep: 03.01.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 03.01.19 12.55 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 03.01.19 12.55 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 03.01.19 12.55 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 03.01.19 12.55 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 03.01.19 12.55 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 03.01.19 12.55 |      |



# Certificate of Analytical Results 615917



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS01**  
Lab Sample Id: 615917-001

Matrix: Soil  
Date Collected: 02.19.19 11.35

Date Received: 02.27.19 11.25  
Sample Depth: 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 03.04.19 15.00

Basis: Wet Weight

Seq Number: 3081082

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.05.19 03.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.05.19 03.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <b>0.00261</b>    | 0.00200      | mg/kg         | 03.05.19 03.52       |             | 1   |
| m,p-Xylenes          | 179601-23-1       | <b>0.00402</b>    | 0.00400      | mg/kg         | 03.05.19 03.52       |             | 1   |
| o-Xylene             | 95-47-6           | <b>0.00334</b>    | 0.00200      | mg/kg         | 03.05.19 03.52       |             | 1   |
| Total Xylenes        | 1330-20-7         | <b>0.00736</b>    | 0.00200      | mg/kg         | 03.05.19 03.52       |             | 1   |
| Total BTEX           |                   | <b>0.00997</b>    | 0.00200      | mg/kg         | 03.05.19 03.52       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 117               | %            | 70-130        | 03.05.19 03.52       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 120               | %            | 70-130        | 03.05.19 03.52       |             |     |



# Certificate of Analytical Results 615917



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW01**  
Lab Sample Id: 615917-002

Matrix: Soil  
Date Collected: 02.19.19 11.38

Date Received: 02.27.19 11.25  
Sample Depth: 0 - 2

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081021

Date Prep: 03.02.19 09.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.99  | 4.99 | mg/kg | 03.02.19 19.52 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3080899

Date Prep: 03.01.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0       | 15.0 | mg/kg | 03.01.19 13.53 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>39.0</b> | 15.0 | mg/kg | 03.01.19 13.53 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0       | 15.0 | mg/kg | 03.01.19 13.53 | U    | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>39.0</b> | 15.0 | mg/kg | 03.01.19 13.53 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 100        | %     | 70-135 | 03.01.19 13.53 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 03.01.19 13.53 |      |





## Certificate of Analytical Results 615917



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW01**  
 Lab Sample Id: 615917-002

Matrix: Soil  
 Date Collected: 02.19.19 11.38

Date Received: 02.27.19 11.25  
 Sample Depth: 0 - 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 03.04.19 15.00

Basis: Wet Weight

Seq Number: 3081082

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 03.05.19 02.36       | U           | 1   |
| <b>Toluene</b>       | 108-88-3          | <b>0.00257</b>    | 0.00202      | mg/kg         | 03.05.19 02.36       |             | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 03.05.19 02.36       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 03.05.19 02.36       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 03.05.19 02.36       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 03.05.19 02.36       | U           | 1   |
| <b>Total BTEX</b>    |                   | <b>0.00257</b>    | 0.00202      | mg/kg         | 03.05.19 02.36       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 111               | %            | 70-130        | 03.05.19 02.36       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 119               | %            | 70-130        | 03.05.19 02.36       |             |     |



## 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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

MB Sample Id: 7672865-1-BLK

Matrix: Solid

LCS Sample Id: 7672865-1-BKS

Prep Method: E300P

Date Prep: 03.02.19

LCSD Sample Id: 7672865-1-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          | 248        | 99       | 250         | 100       | 90-110 | 1    | 20        | mg/kg | 03.02.19 14:17 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

Parent Sample Id: 615918-006

Matrix: Soil

MS Sample Id: 615918-006 S

Prep Method: E300P

Date Prep: 03.02.19

MSD Sample Id: 615918-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 17.9          | 250          | 277       | 104     | 277        | 104      | 90-110 | 0    | 20        | mg/kg | 03.04.19 11:14 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

Parent Sample Id: 615920-009

Matrix: Soil

MS Sample Id: 615920-009 S

Prep Method: E300P

Date Prep: 03.02.19

MSD Sample Id: 615920-009 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 115           | 250          | 393       | 111     | 382        | 107      | 90-110 | 3    | 20        | mg/kg | 03.02.19 17:11 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3080899

MB Sample Id: 7672837-1-BLK

Matrix: Solid

LCS Sample Id: 7672837-1-BKS

Prep Method: TX1005P

Date Prep: 03.01.19

LCSD Sample Id: 7672837-1-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         | 899        | 90       | 1020        | 102       | 70-135 | 13   | 20        | mg/kg | 03.01.19 12:17 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 937        | 94       | 1090        | 109       | 70-135 | 15   | 20        | mg/kg | 03.01.19 12:17 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 117     |         | 122      |          | 128       |           | 70-135 | %     | 03.01.19 12:17 |
| o-Terphenyl    | 117     |         | 101      |          | 118       |           | 70-135 | %     | 03.01.19 12:17 |

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

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

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3080899

Parent Sample Id: 615917-001

Matrix: Soil

MS Sample Id: 615917-001 S

Prep Method: TX1005P

Date Prep: 03.01.19

MSD Sample Id: 615917-001 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         | 994       | 99      | 921        | 92       | 70-135 | 8    | 20        | mg/kg | 03.01.19 13:15 |      |
| Diesel Range Organics (DRO)       | <8.13         | 1000         | 1070      | 107     | 995        | 100      | 70-135 | 7    | 20        | mg/kg | 03.01.19 13:15 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 117      |          | 70-135 | %     | 03.01.19 13:15 |
| o-Terphenyl    | 109     |         | 102      |          | 70-135 | %     | 03.01.19 13:15 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3081082

MB Sample Id: 7672940-1-BLK

Matrix: Solid

LCS Sample Id: 7672940-1-BKS

Prep Method: SW5030B

Date Prep: 03.04.19

LCSD Sample Id: 7672940-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000383 | 0.0996       | 0.129      | 130      | 0.129       | 129       | 70-130 | 0    | 35        | mg/kg | 03.05.19 00:44 |      |
| Toluene      | <0.000454 | 0.0996       | 0.105      | 105      | 0.106       | 106       | 70-130 | 1    | 35        | mg/kg | 03.05.19 00:44 |      |
| Ethylbenzene | <0.000563 | 0.0996       | 0.0939     | 94       | 0.0957      | 96        | 70-130 | 2    | 35        | mg/kg | 03.05.19 00:44 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.189      | 95       | 0.194       | 97        | 70-130 | 3    | 35        | mg/kg | 03.05.19 00:44 |      |
| o-Xylene     | <0.000343 | 0.0996       | 0.0928     | 93       | 0.0959      | 96        | 70-130 | 3    | 35        | mg/kg | 03.05.19 00:44 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 118     |         | 109      |          | 115       |           | 70-130 | %     | 03.05.19 00:44 |
| 4-Bromofluorobenzene | 96      |         | 96       |          | 103       |           | 70-130 | %     | 03.05.19 00:44 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3081082

Parent Sample Id: 615917-002

Matrix: Soil

MS Sample Id: 615917-002 S

Prep Method: SW5030B

Date Prep: 03.04.19

MSD Sample Id: 615917-002 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000384     | 0.0998       | 0.115     | 115     | 0.120      | 120      | 70-130 | 4    | 35        | mg/kg | 03.05.19 01:22 |      |
| Toluene      | 0.00257       | 0.0998       | 0.0936    | 91      | 0.0982     | 96       | 70-130 | 5    | 35        | mg/kg | 03.05.19 01:22 |      |
| Ethylbenzene | <0.000564     | 0.0998       | 0.0792    | 79      | 0.0858     | 86       | 70-130 | 8    | 35        | mg/kg | 03.05.19 01:22 |      |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.159     | 80      | 0.172      | 86       | 70-130 | 8    | 35        | mg/kg | 03.05.19 01:22 |      |
| o-Xylene     | 0.000413      | 0.0998       | 0.0788    | 79      | 0.0841     | 84       | 70-130 | 7    | 35        | mg/kg | 03.05.19 01:22 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 116     |         | 116      |          | 70-130 | %     | 03.05.19 01:22 |
| 4-Bromofluorobenzene | 103     |         | 102      |          | 70-130 | %     | 03.05.19 01:22 |

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

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

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

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



## Chain of Custody

Work Order No: 1615917

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 |

## ANALYSIS REQUEST

## Work Order Notes

|                    |                                    |                                    |                             |                                   |
|--------------------|------------------------------------|------------------------------------|-----------------------------|-----------------------------------|
| Program: UST/PST   | <input type="checkbox"/> RP        | <input type="checkbox"/> Rowfields | <input type="checkbox"/> C  | <input type="checkbox"/> Depthund |
| State of Project:  |                                    |                                    |                             |                                   |
| Reporting Level II | <input type="checkbox"/> Level III | <input type="checkbox"/> ST/UST    | <input type="checkbox"/> RP | <input type="checkbox"/> Level IV |
| Deliverables: EDD  | <input type="checkbox"/>           | ADAPT                              | <input type="checkbox"/>    | Other:                            |

|                 |                  |             |                                     |
|-----------------|------------------|-------------|-------------------------------------|
| Project Name:   | PLU CVX JV #005H | Turn Around | <input checked="" type="checkbox"/> |
| Project Number: | 12918093         | Routine     | <input checked="" type="checkbox"/> |
| P.O. Number:    | 2RP-4779         | Rush        | <input type="checkbox"/>            |
| Sampler's Name: | Martin Wills     | Due Date:   |                                     |

|                       |             |                |                    |          |     |    |
|-----------------------|-------------|----------------|--------------------|----------|-----|----|
| SAMPLE RECEIPT        | Temp Blank: | Yes            | No                 | Wet Ice: | Yes | No |
| Temperature (°C):     | 0.5/0.4     | Thermometer ID |                    |          |     |    |
| Received Intact:      | Yes         | No             |                    |          |     |    |
| Cooler Custody Seals: | Yes         | No             | Correction Factor: |          |     |    |
| Sample Custody Seals: | Yes         | No             | Total Containers:  |          |     |    |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth |
|-----------------------|--------|--------------|--------------|-------|
|-----------------------|--------|--------------|--------------|-------|

|      |   |           |      |     |
|------|---|-----------|------|-----|
| FS01 | S | 2/19/2019 | 1135 | 2   |
| SW01 | S | 2/19/2019 | 1138 | 0-2 |

## Number of Containers

TPH (EPA 8015)

BTEX (EPA 8021)

Chloride (EPA 300.0)

## Sample Comments

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

Total 200.7 / 6010 200.8 / 6020:  
 Circle Method(s) and Metal(s) to be analyzed

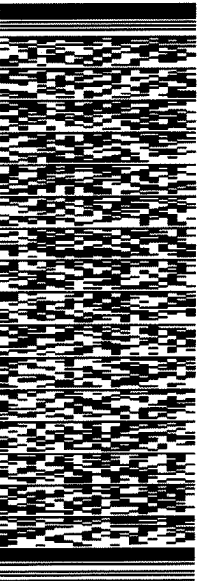
8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |              |                              |                          |               |
|------------------------------|--------------------------|--------------|------------------------------|--------------------------|---------------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time    | Relinquished by: (Signature) | Received by: (Signature) | Date/Time     |
| <i>[Signature]</i>           | <i>[Signature]</i>       | 2/26/18 4:38 | <i>[Signature]</i>           | <i>[Signature]</i>       | 2/27/19 11:25 |

|                                                                                                                                                              |  |                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|
| ORIGIN ID:CAOA (575) 887-6245<br>XENCO<br>PAC N MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US                                            |  | SHIP DATE: 26FEB19<br>ACTWGT: 62.00 LB<br>CAD: 101813706INET4100<br>DIMS: 30x15x16 IN |
| TO HOLD FOR XENCO<br>FEDEX EXPRESS SHIP CENTER<br>FEDEX SHIP CENTER<br>3600 COUNTY RD 1276 S<br>MIDLAND TX 79711<br>(806) 794-1296<br>INV/ REF:<br>PO: DEPT: |  | BILL RECIPIENT                                                                        |
| TRK# 7745 6785 0115<br>0201<br>WED - 27 FEB HOLD<br>STANDARD OVERNIGHT<br>HLD<br>MAF A<br>TX-US LBB<br>41 MAF A                                              |  |                                                                                       |




J181818010701ur

565J20E3D/23AD

**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](http://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.





Client: LT Environmental, Inc.

Date/ Time Received: 02/27/2019 11:25:00 AM

Work Order #: 615917

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/27/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/27/2019

# Analytical Report 615919

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV #005H**

**12918093**

**05-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)



05-MAR-19

Project Manager: **Adrian Baker**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **615919**

**PLU CVX JV #005H**

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) 615919. 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. 615919 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 615919

LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| FS09      | S      | 02-19-19 09:35 | 6            | 615919-001    |
| SW10      | S      | 02-19-19 09:50 | 0 - 6        | 615919-002    |
| SW11      | S      | 02-19-19 09:53 | 0 - 6        | 615919-003    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV #005H**

Project ID: 12918093

Work Order Number(s): 615919

Report Date: 05-MAR-19

Date Received: 02/27/2019

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3081082 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 615919

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV #005H

**Project Id:** 12918093  
**Contact:** Adrian Baker  
**Project Location:** Delaware Basin

**Date Received in Lab:** Wed Feb-27-19 12:11 pm  
**Report Date:** 05-MAR-19  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 615919-001       | 615919-002       | 615919-003       |  |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|--|--|--|
|                                    | <i>Field Id:</i>  | FS09             | SW10             | SW11             |  |  |  |
|                                    | <i>Depth:</i>     | 6-               | 0-6              | 0-6              |  |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             |  |  |  |
|                                    | <i>Sampled:</i>   | Feb-19-19 09:35  | Feb-19-19 09:50  | Feb-19-19 09:53  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Mar-04-19 15:00  | Mar-04-19 15:00  | Mar-04-19 15:00  |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-05-19 04:11  | Mar-05-19 04:30  | Mar-05-19 04:49  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Benzene                            |                   | <0.00200 0.00200 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| Toluene                            |                   | 0.00218 0.00200  | 0.00215 0.00199  | <0.00200 0.00200 |  |  |  |
| Ethylbenzene                       |                   | 0.00269 0.00200  | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| m,p-Xylenes                        |                   | 0.0184 0.00401   | <0.00398 0.00398 | 0.0130 0.00400   |  |  |  |
| o-Xylene                           |                   | 0.00814 0.00200  | <0.00199 0.00199 | 0.00908 0.00200  |  |  |  |
| Total Xylenes                      |                   | 0.0265 0.00200   | <0.00199 0.00199 | 0.0221 0.00200   |  |  |  |
| Total BTEX                         |                   | 0.0314 0.00200   | 0.00215 0.00199  | 0.0221 0.00200   |  |  |  |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Mar-02-19 09:40  | Mar-02-19 09:40  | Mar-02-19 09:40  |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-02-19 17:37  | Mar-02-19 17:43  | Mar-02-19 18:34  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Chloride                           |                   | 1650 24.9        | 941 4.99         | 1080 5.03        |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Mar-01-19 09:00  | Mar-01-19 09:00  | Mar-01-19 09:00  |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-01-19 16:06  | Mar-01-19 16:25  | Mar-01-19 17:23  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | 156 15.0         | <15.0 15.0       | 54.1 15.0        |  |  |  |
| Diesel Range Organics (DRO)        |                   | 2050 15.0        | 147 15.0         | 715 15.0         |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | 324 15.0         | 23.1 15.0        | 114 15.0         |  |  |  |
| Total TPH                          |                   | 2530 15.0        | 170 15.0         | 883 15.0         |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant





# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS09**  
Lab Sample Id: 615919-001

Matrix: Soil  
Date Collected: 02.19.19 09.35

Date Received: 02.27.19 12.11  
Sample Depth: 6

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081021

Date Prep: 03.02.19 09.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1650   | 24.9 | mg/kg | 03.02.19 17.37 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3080899

Date Prep: 03.01.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | 156    | 15.0 | mg/kg | 03.01.19 16.06 |      | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 2050   | 15.0 | mg/kg | 03.01.19 16.06 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 324    | 15.0 | mg/kg | 03.01.19 16.06 |      | 1   |
| Total TPH                          | PHC635     | 2530   | 15.0 | mg/kg | 03.01.19 16.06 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 118        | %     | 70-135 | 03.01.19 16.06 |      |
| o-Terphenyl    | 84-15-1    | 126        | %     | 70-135 | 03.01.19 16.06 |      |



# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **FS09**  
Lab Sample Id: 615919-001

Matrix: Soil  
Date Collected: 02.19.19 09.35

Date Received: 02.27.19 12.11  
Sample Depth: 6

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 03.04.19 15.00

Basis: Wet Weight

Seq Number: 3081082

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.05.19 04.11       | U           | 1   |
| <b>Toluene</b>       | 108-88-3          | <b>0.00218</b>    | 0.00200      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>Ethylbenzene</b>  | 100-41-4          | <b>0.00269</b>    | 0.00200      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>m,p-Xylenes</b>   | 179601-23-1       | <b>0.0184</b>     | 0.00401      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>o-Xylene</b>      | 95-47-6           | <b>0.00814</b>    | 0.00200      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>Total Xylenes</b> | 1330-20-7         | <b>0.0265</b>     | 0.00200      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>Total BTEX</b>    |                   | <b>0.0314</b>     | 0.00200      | mg/kg         | 03.05.19 04.11       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 124               | %            | 70-130        | 03.05.19 04.11       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 03.05.19 04.11       |             |     |



# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW10**  
Lab Sample Id: 615919-002

Matrix: Soil  
Date Collected: 02.19.19 09.50

Date Received: 02.27.19 12.11  
Sample Depth: 0 - 6

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081021

Date Prep: 03.02.19 09.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 941    | 4.99 | mg/kg | 03.02.19 17.43 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3080899

Date Prep: 03.01.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 03.01.19 16.25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 147    | 15.0 | mg/kg | 03.01.19 16.25 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 23.1   | 15.0 | mg/kg | 03.01.19 16.25 |      | 1   |
| Total TPH                          | PHC635     | 170    | 15.0 | mg/kg | 03.01.19 16.25 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 03.01.19 16.25 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 03.01.19 16.25 |      |



# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW10**  
Lab Sample Id: 615919-002

Matrix: Soil  
Date Collected: 02.19.19 09.50

Date Received: 02.27.19 12.11  
Sample Depth: 0 - 6

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 03.04.19 15.00

Basis: Wet Weight

Seq Number: 3081082

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 03.05.19 04.30       | U           | 1   |
| <b>Toluene</b>       | 108-88-3          | <b>0.00215</b>    | 0.00199      | mg/kg         | 03.05.19 04.30       |             | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.05.19 04.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.05.19 04.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.05.19 04.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.05.19 04.30       | U           | 1   |
| <b>Total BTEX</b>    |                   | <b>0.00215</b>    | 0.00199      | mg/kg         | 03.05.19 04.30       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 127               | %            | 70-130        | 03.05.19 04.30       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 03.05.19 04.30       |             |     |



# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW11**  
Lab Sample Id: 615919-003

Matrix: Soil  
Date Collected: 02.19.19 09.53

Date Received: 02.27.19 12.11  
Sample Depth: 0 - 6

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081021

Date Prep: 03.02.19 09.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1080   | 5.03 | mg/kg | 03.02.19 18.34 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3080899

Date Prep: 03.01.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | 54.1   | 15.0 | mg/kg | 03.01.19 17.23 |      | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 715    | 15.0 | mg/kg | 03.01.19 17.23 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 114    | 15.0 | mg/kg | 03.01.19 17.23 |      | 1   |
| Total TPH                          | PHC635     | 883    | 15.0 | mg/kg | 03.01.19 17.23 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 101        | %     | 70-135 | 03.01.19 17.23 |      |
| o-Terphenyl    | 84-15-1    | 111        | %     | 70-135 | 03.01.19 17.23 |      |



# Certificate of Analytical Results 615919



## LT Environmental, Inc., Arvada, CO

PLU CVX JV #005H

Sample Id: **SW11**  
Lab Sample Id: 615919-003

Matrix: Soil  
Date Collected: 02.19.19 09.53

Date Received: 02.27.19 12.11  
Sample Depth: 0 - 6

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081082

Date Prep: 03.04.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.05.19 04.49       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.05.19 04.49       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.05.19 04.49       | U           | 1   |
| <b>m,p-Xylenes</b>   | 179601-23-1       | <b>0.0130</b>     | 0.00400      | mg/kg         | 03.05.19 04.49       |             | 1   |
| <b>o-Xylene</b>      | 95-47-6           | <b>0.00908</b>    | 0.00200      | mg/kg         | 03.05.19 04.49       |             | 1   |
| <b>Total Xylenes</b> | 1330-20-7         | <b>0.0221</b>     | 0.00200      | mg/kg         | 03.05.19 04.49       |             | 1   |
| <b>Total BTEX</b>    |                   | <b>0.0221</b>     | 0.00200      | mg/kg         | 03.05.19 04.49       |             | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 03.05.19 04.49       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 125               | %            | 70-130        | 03.05.19 04.49       |             |     |





## 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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

MB Sample Id: 7672865-1-BLK

Matrix: Solid

LCS Sample Id: 7672865-1-BKS

Prep Method: E300P

Date Prep: 03.02.19

LCSD Sample Id: 7672865-1-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          | 248        | 99       | 250         | 100       | 90-110 | 1    | 20        | mg/kg | 03.02.19 14:17 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

Parent Sample Id: 615918-006

Matrix: Soil

MS Sample Id: 615918-006 S

Prep Method: E300P

Date Prep: 03.02.19

MSD Sample Id: 615918-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 17.9          | 250          | 277       | 104     | 277        | 104      | 90-110 | 0    | 20        | mg/kg | 03.04.19 11:14 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081021

Parent Sample Id: 615920-009

Matrix: Soil

MS Sample Id: 615920-009 S

Prep Method: E300P

Date Prep: 03.02.19

MSD Sample Id: 615920-009 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 115           | 250          | 393       | 111     | 382        | 107      | 90-110 | 3    | 20        | mg/kg | 03.02.19 17:11 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3080899

MB Sample Id: 7672837-1-BLK

Matrix: Solid

LCS Sample Id: 7672837-1-BKS

Prep Method: TX1005P

Date Prep: 03.01.19

LCSD Sample Id: 7672837-1-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         | 899        | 90       | 1020        | 102       | 70-135 | 13   | 20        | mg/kg | 03.01.19 12:17 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 937        | 94       | 1090        | 109       | 70-135 | 15   | 20        | mg/kg | 03.01.19 12:17 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 117     |         | 122      |          | 128       |           | 70-135 | %     | 03.01.19 12:17 |
| o-Terphenyl    | 117     |         | 101      |          | 118       |           | 70-135 | %     | 03.01.19 12:17 |

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

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

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



## LT Environmental, Inc.

PLU CVX JV #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3080899

Parent Sample Id: 615917-001

Matrix: Soil

MS Sample Id: 615917-001 S

Prep Method: TX1005P

Date Prep: 03.01.19

MSD Sample Id: 615917-001 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         | 994       | 99      | 921        | 92       | 70-135 | 8    | 20        | mg/kg | 03.01.19 13:15 |      |
| Diesel Range Organics (DRO)       | <8.13         | 1000         | 1070      | 107     | 995        | 100      | 70-135 | 7    | 20        | mg/kg | 03.01.19 13:15 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 127     |         | 117      |          | 70-135 | %     | 03.01.19 13:15 |
| o-Terphenyl    | 109     |         | 102      |          | 70-135 | %     | 03.01.19 13:15 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3081082

MB Sample Id: 7672940-1-BLK

Matrix: Solid

LCS Sample Id: 7672940-1-BKS

Prep Method: SW5030B

Date Prep: 03.04.19

LCSD Sample Id: 7672940-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000383 | 0.0996       | 0.129      | 130      | 0.129       | 129       | 70-130 | 0    | 35        | mg/kg | 03.05.19 00:44 |      |
| Toluene      | <0.000454 | 0.0996       | 0.105      | 105      | 0.106       | 106       | 70-130 | 1    | 35        | mg/kg | 03.05.19 00:44 |      |
| Ethylbenzene | <0.000563 | 0.0996       | 0.0939     | 94       | 0.0957      | 96        | 70-130 | 2    | 35        | mg/kg | 03.05.19 00:44 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.189      | 95       | 0.194       | 97        | 70-130 | 3    | 35        | mg/kg | 03.05.19 00:44 |      |
| o-Xylene     | <0.000343 | 0.0996       | 0.0928     | 93       | 0.0959      | 96        | 70-130 | 3    | 35        | mg/kg | 03.05.19 00:44 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 118     |         | 109      |          | 115       |           | 70-130 | %     | 03.05.19 00:44 |
| 4-Bromofluorobenzene | 96      |         | 96       |          | 103       |           | 70-130 | %     | 03.05.19 00:44 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3081082

Parent Sample Id: 615917-002

Matrix: Soil

MS Sample Id: 615917-002 S

Prep Method: SW5030B

Date Prep: 03.04.19

MSD Sample Id: 615917-002 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000384     | 0.0998       | 0.115     | 115     | 0.120      | 120      | 70-130 | 4    | 35        | mg/kg | 03.05.19 01:22 |      |
| Toluene      | 0.00257       | 0.0998       | 0.0936    | 91      | 0.0982     | 96       | 70-130 | 5    | 35        | mg/kg | 03.05.19 01:22 |      |
| Ethylbenzene | <0.000564     | 0.0998       | 0.0792    | 79      | 0.0858     | 86       | 70-130 | 8    | 35        | mg/kg | 03.05.19 01:22 |      |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.159     | 80      | 0.172      | 86       | 70-130 | 8    | 35        | mg/kg | 03.05.19 01:22 |      |
| o-Xylene     | 0.000413      | 0.0998       | 0.0788    | 79      | 0.0841     | 84       | 70-130 | 7    | 35        | mg/kg | 03.05.19 01:22 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 116     |         | 116      |          | 70-130 | %     | 03.05.19 01:22 |
| 4-Bromofluorobenzene | 103     |         | 102      |          | 70-130 | %     | 03.05.19 01:22 |

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

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

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

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



## Chain of Custody

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

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Work Order No: 1615919

|                  |                                       |                         |                                    |
|------------------|---------------------------------------|-------------------------|------------------------------------|
| Project Manager: | Adrian Baker                          | Bill to: (if different) | Kyle Littlell                      |
| 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 |

|                                                                                                                                                                                             |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Program: UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Crownfields <input type="checkbox"/> C <input type="checkbox"/> perfund <input type="checkbox"/><br>State of Project: |                                                                                                           |
| Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>                | Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="checkbox"/> |

|                 |                  |             |                                     |                  |  |  |  |  |  |  |  |  |  |                  |
|-----------------|------------------|-------------|-------------------------------------|------------------|--|--|--|--|--|--|--|--|--|------------------|
| Project Name:   | PLU CVX JV #005H | Turn Around |                                     | ANALYSIS REQUEST |  |  |  |  |  |  |  |  |  | Work Order Notes |
| Project Number: | 12918093         | Routine     | <input checked="" type="checkbox"/> |                  |  |  |  |  |  |  |  |  |  |                  |
| P.O. Number:    | 2RP-2526         | Rush:       |                                     |                  |  |  |  |  |  |  |  |  |  |                  |
| Sampler's Name: | Martin Wills     | Due Date:   |                                     |                  |  |  |  |  |  |  |  |  |  |                  |

| SAMPLE RECEIPT        |             |     |    | Number of Containers |     |    |                |                 |                      |  |  |  |  |  |  |  | Sample Comments |
|-----------------------|-------------|-----|----|----------------------|-----|----|----------------|-----------------|----------------------|--|--|--|--|--|--|--|-----------------|
| Temperature (°C):     | Temp Blank: | Yes | No | Well Ice:            | Yes | No | TPH (EPA 8015) | BTEX (EPA 8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |  |                 |
| Received Intact:      | Yes         | No  |    | Thermometer ID:      |     |    |                |                 |                      |  |  |  |  |  |  |  |                 |
| Cooler Custody Seals: | Yes         | No  |    | Correction Factor:   |     |    |                |                 |                      |  |  |  |  |  |  |  |                 |
| Sample Custody Seals: | Yes         | No  |    | Total Containers:    |     |    |                |                 |                      |  |  |  |  |  |  |  |                 |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|--------|--------------|--------------|-------|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|
| FS09                  | S      | 2/19/2019    | 935          | 6     | 1 | X | X | X |  |  |  |  |  |  |  |  |  |  |  |  |
| SW10                  | S      | 2/19/2019    | 950          | 0-6   | 1 | X | X | X |  |  |  |  |  |  |  |  |  |  |  |  |
| SW11                  | S      | 2/19/2019    | 953          | 0-6   | 1 | X | X | X |  |  |  |  |  |  |  |  |  |  |  |  |

*(Signature)*

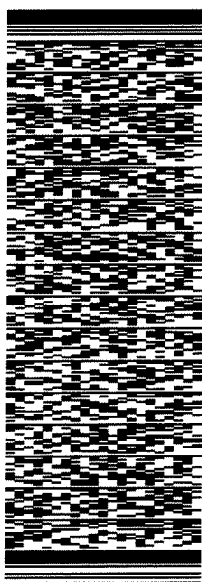
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

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 Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |              |                              |                          |               |
|------------------------------|--------------------------|--------------|------------------------------|--------------------------|---------------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time    | Relinquished by: (Signature) | Received by: (Signature) | Date/Time     |
| <i>(Signature)</i>           | <i>(Signature)</i>       | 2/26/19 9:38 | <i>(Signature)</i>           | <i>(Signature)</i>       | 2/27/19 11:05 |

|                                                                                                                                            |                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| ORIGIN ID:CAOA (5/5) 887-6245<br>XENCO<br>PAC IN MAIL<br>910 W PIERCE ST<br>CARLSBAD, NM 88220<br>UNITED STATES US                         | SHIP DATE: 28FEB19<br>ACTWGT: 62.00 LB<br>CAD: 101813706/NET4100<br>DIMS: 30x15x16 IN<br>BILL RECIPIENT |
| TO HOLD FOR XENCO<br>FEDEX EXPRESS SHIP CENTER<br>FEDEX SHIP CENTER<br>3600 COUNTY RD 1276 S<br>MIDLAND TX 79711<br>(800) 794-1296<br>REF: |                                                                                                         |
| DEPT:                                                                                                                                      |                                                                                                         |
| TRK# 7745 6785 0115<br>0201<br>WED - 27 FEB HOLD<br>STANDARD OVERNIGHT<br>HLD<br>MAFA<br>TX-US LBB<br>41 MAFA                              |                                                                                                         |



565J20E3D/23AD

**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.

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Client: LT Environmental, Inc.

Date/ Time Received: 02/27/2019 12:11:00 PM

Work Order #: 615919

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 02/27/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/27/2019



# Analytical Report 620365

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU BS 25**

**012918093**

**12-APR-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)  
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-18-4)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429), North Carolina (483)  
Xenco-Lakeland: Florida (E84098)



12-APR-19

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

Reference: XENCO Report No(s): **620365**  
**PLU BS 25**  
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) 620365. 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. 620365 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

**Kalei Stout**

Midland Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 620365

LT Environmental, Inc., Arvada, CO

PLU BS 25

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| PH01      | S      | 04-02-19 13:00 | 13 ft        | 620365-001    |
| PH02      | S      | 04-02-19 14:00 | 16 ft        | 620365-002    |
| PH03      | S      | 04-02-19 15:00 | 8 ft         | 620365-003    |
| PH04      | S      | 04-03-19 09:40 | 12 ft        | 620365-004    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU BS 25**

Project ID: 012918093  
Work Order Number(s): 620365

Report Date: 12-APR-19  
Date Received: 04/08/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3085039 Inorganic Anions by EPA 300

Lab Sample ID 620365-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 620365-001, -002, -003, -004.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3085235 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 620365

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 25

**Project Id:** 012918093  
**Contact:** Adrian Baker  
**Project Location:** ---

**Date Received in Lab:** Mon Apr-08-19 01:55 pm  
**Report Date:** 12-APR-19  
**Project Manager:** Kalei Stout

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 620365-001       | 620365-002       | 620365-003       | 620365-004       |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|--|--|
|                                    | <i>Field Id:</i>  | PH01             | PH02             | PH03             | PH04             |  |  |
|                                    | <i>Depth:</i>     | 13- ft           | 16- ft           | 8- ft            | 12- ft           |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             |  |  |
|                                    | <i>Sampled:</i>   | Apr-02-19 13:00  | Apr-02-19 14:00  | Apr-02-19 15:00  | Apr-03-19 09:40  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Apr-10-19 12:00  | Apr-10-19 12:00  | Apr-10-19 12:00  | Apr-10-19 12:00  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-10-19 17:29  | Apr-10-19 17:48  | Apr-10-19 18:07  | Apr-10-19 18:27  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Benzene                            |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| Toluene                            |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| m,p-Xylenes                        |                   | <0.00401 0.00401 | <0.00402 0.00402 | <0.00404 0.00404 | <0.00398 0.00398 |  |  |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00199 0.00199 |  |  |
| <b>Inorganic Anions by EPA 300</b> | <i>Extracted:</i> | Apr-08-19 17:00  | Apr-08-19 17:00  | Apr-08-19 17:00  | Apr-08-19 17:00  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-09-19 08:05  | Apr-09-19 09:53  | Apr-09-19 11:08  | Apr-09-19 11:15  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Chloride                           |                   | 637 5.03         | 441 4.99         | 43.2 4.96        | 74.3 4.96        |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | *** ** *         | *** ** *         | *** ** *         | *** ** *         |  |  |
|                                    | <i>Analyzed:</i>  | Apr-08-19 17:42  | Apr-08-19 18:01  | Apr-08-19 18:19  | Apr-08-19 18:38  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |
| Total GRO-DRO                      |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout  
Midland Laboratory Director



# Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH01** Matrix: Soil Date Received: 04.08.19 13.55  
 Lab Sample Id: 620365-001 Date Collected: 04.02.19 13.00 Sample Depth: 13 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 04.08.19 17.00 Basis: Wet Weight  
 Seq Number: 3085039

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 637    | 5.03 | mg/kg | 04.09.19 08.05 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 04.08.19 09.00 Basis: Wet Weight  
 Seq Number: 3085086

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.08.19 17.42 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.08.19 17.42 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.08.19 17.42 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.08.19 17.42 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.08.19 17.42 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 04.08.19 17.42 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 04.08.19 17.42 |      |





## Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH01**  
 Lab Sample Id: 620365-001

Matrix: Soil  
 Date Collected: 04.02.19 13.00

Date Received: 04.08.19 13.55  
 Sample Depth: 13 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 12.00

Basis: Wet Weight

Seq Number: 3085235

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.10.19 17.29       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 04.10.19 17.29       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 89                | %            | 70-130        | 04.10.19 17.29       |             |     |



# Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH02** Matrix: Soil Date Received: 04.08.19 13.55  
 Lab Sample Id: 620365-002 Date Collected: 04.02.19 14.00 Sample Depth: 16 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 04.08.19 17.00 Basis: Wet Weight  
 Seq Number: 3085039

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 441    | 4.99 | mg/kg | 04.09.19 09.53 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 04.08.19 09.00 Basis: Wet Weight  
 Seq Number: 3085086

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.08.19 18.01 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.08.19 18.01 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.08.19 18.01 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.08.19 18.01 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.08.19 18.01 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 04.08.19 18.01 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 04.08.19 18.01 |      |



## Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH02**  
 Lab Sample Id: 620365-002

Matrix: Soil  
 Date Collected: 04.02.19 14.00

Date Received: 04.08.19 13.55  
 Sample Depth: 16 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 12.00

Basis: Wet Weight

Seq Number: 3085235

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.10.19 17.48       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 97                | %            | 70-130        | 04.10.19 17.48       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 94                | %            | 70-130        | 04.10.19 17.48       |             |     |



# Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH03** Matrix: Soil Date Received: 04.08.19 13.55  
 Lab Sample Id: 620365-003 Date Collected: 04.02.19 15.00 Sample Depth: 8 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 04.08.19 17.00 Basis: Wet Weight  
 Seq Number: 3085039

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 43.2   | 4.96 | mg/kg | 04.09.19 11.08 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 04.08.19 09.00 Basis: Wet Weight  
 Seq Number: 3085086

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.08.19 18.19 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.08.19 18.19 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.08.19 18.19 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.08.19 18.19 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.08.19 18.19 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 04.08.19 18.19 |      |
| o-Terphenyl    | 84-15-1    | 92         | %     | 70-135 | 04.08.19 18.19 |      |



## Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH03**  
 Lab Sample Id: 620365-003

Matrix: Soil  
 Date Collected: 04.02.19 15.00

Date Received: 04.08.19 13.55  
 Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 12.00

Basis: Wet Weight

Seq Number: 3085235

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 04.10.19 18.07       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 04.10.19 18.07       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 97                | %            | 70-130        | 04.10.19 18.07       |             |     |



# Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH04**  
Lab Sample Id: 620365-004

Matrix: Soil  
Date Collected: 04.03.19 09.40

Date Received: 04.08.19 13.55  
Sample Depth: 12 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085039

Date Prep: 04.08.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 74.3   | 4.96 | mg/kg | 04.09.19 11.15 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085086

Date Prep: 04.08.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 04.08.19 18.38 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 04.08.19 18.38 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 04.08.19 18.38 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 04.08.19 18.38 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <14.9  | 14.9 | mg/kg | 04.08.19 18.38 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 04.08.19 18.38 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 04.08.19 18.38 |      |





# Certificate of Analytical Results 620365



## LT Environmental, Inc., Arvada, CO

PLU BS 25

Sample Id: **PH04**  
Lab Sample Id: 620365-004

Matrix: Soil  
Date Collected: 04.03.19 09.40

Date Received: 04.08.19 13.55  
Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.10.19 12.00

Basis: Wet Weight

Seq Number: 3085235

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 04.10.19 18.27       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 103               | %            | 70-130        | 04.10.19 18.27       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 04.10.19 18.27       |             |     |



## 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



## LT Environmental, Inc.

PLU BS 25

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085039

MB Sample Id: 7675306-1-BLK

Matrix: Solid

LCS Sample Id: 7675306-1-BKS

Prep Method: E300P

Date Prep: 04.08.19

LCSD Sample Id: 7675306-1-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          | 250        | 100      | 252         | 101       | 90-110 | 1    | 20        | mg/kg | 04.09.19 07:51 |      |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085039

Parent Sample Id: 620365-001

Matrix: Soil

MS Sample Id: 620365-001 S

Prep Method: E300P

Date Prep: 04.08.19

MSD Sample Id: 620365-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 637           | 252          | 802       | 65      | 882        | 97       | 90-110 | 10   | 20        | mg/kg | 04.09.19 08:11 | X    |

## Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085039

Parent Sample Id: 620365-002

Matrix: Soil

MS Sample Id: 620365-002 S

Prep Method: E300P

Date Prep: 04.08.19

MSD Sample Id: 620365-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 441           | 250          | 563       | 49      | 563        | 49       | 90-110 | 0    | 20        | mg/kg | 04.09.19 10:00 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3085086

MB Sample Id: 7675364-1-BLK

Matrix: Solid

LCS Sample Id: 7675364-1-BKS

Prep Method: TX1005P

Date Prep: 04.08.19

LCSD Sample Id: 7675364-1-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         | 948        | 95       | 981         | 98        | 70-135 | 3    | 20        | mg/kg | 04.08.19 11:01 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 1010       | 101      | 1050        | 105       | 70-135 | 4    | 20        | mg/kg | 04.08.19 11:01 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 101     |         | 123      |          | 126       |           | 70-135 | %     | 04.08.19 11:01 |
| o-Terphenyl    | 103     |         | 118      |          | 121       |           | 70-135 | %     | 04.08.19 11:01 |

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. =  $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



## LT Environmental, Inc.

PLU BS 25

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3085086

Parent Sample Id: 620302-001

Matrix: Soil

MS Sample Id: 620302-001 S

Prep Method: TX1005P

Date Prep: 04.08.19

MSD Sample Id: 620302-001 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          | 972       | 97      | 984        | 98       | 70-135 | 1    | 20        | mg/kg | 04.08.19 11:59 |      |
| Diesel Range Organics (DRO)       | <8.11         | 998          | 1090      | 109     | 1100       | 110      | 70-135 | 1    | 20        | mg/kg | 04.08.19 11:59 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 117     |         | 117      |          | 70-135 | %     | 04.08.19 11:59 |
| o-Terphenyl    | 96      |         | 98       |          | 70-135 | %     | 04.08.19 11:59 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3085235

MB Sample Id: 7675486-1-BLK

Matrix: Solid

LCS Sample Id: 7675486-1-BKS

Prep Method: SW5030B

Date Prep: 04.10.19

LCSD Sample Id: 7675486-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000383 | 0.0996       | 0.0984     | 99       | 0.106       | 107       | 70-130 | 7    | 35        | mg/kg | 04.10.19 13:46 |      |
| Toluene      | <0.000454 | 0.0996       | 0.100      | 100      | 0.107       | 108       | 70-130 | 7    | 35        | mg/kg | 04.10.19 13:46 |      |
| Ethylbenzene | <0.000563 | 0.0996       | 0.0940     | 94       | 0.100       | 101       | 70-130 | 6    | 35        | mg/kg | 04.10.19 13:46 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.187      | 94       | 0.200       | 101       | 70-130 | 7    | 35        | mg/kg | 04.10.19 13:46 |      |
| o-Xylene     | <0.000343 | 0.0996       | 0.0935     | 94       | 0.101       | 102       | 70-130 | 8    | 35        | mg/kg | 04.10.19 13:46 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 91      |         | 98       |          | 100       |           | 70-130 | %     | 04.10.19 13:46 |
| 4-Bromofluorobenzene | 88      |         | 95       |          | 99        |           | 70-130 | %     | 04.10.19 13:46 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3085235

Parent Sample Id: 620613-001

Matrix: Soil

MS Sample Id: 620613-001 S

Prep Method: SW5030B

Date Prep: 04.10.19

MSD Sample Id: 620613-001 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        | 0.0932    | 93      | 0.0782     | 79       | 70-130 | 18   | 35        | mg/kg | 04.10.19 14:26 |      |
| Toluene      | <0.000457     | 0.100        | 0.0926    | 93      | 0.0787     | 79       | 70-130 | 16   | 35        | mg/kg | 04.10.19 14:26 |      |
| Ethylbenzene | <0.000566     | 0.100        | 0.0849    | 85      | 0.0718     | 72       | 70-130 | 17   | 35        | mg/kg | 04.10.19 14:26 |      |
| m,p-Xylenes  | <0.00102      | 0.200        | 0.169     | 85      | 0.144      | 72       | 70-130 | 16   | 35        | mg/kg | 04.10.19 14:26 |      |
| o-Xylene     | <0.000345     | 0.100        | 0.0849    | 85      | 0.0728     | 73       | 70-130 | 15   | 35        | mg/kg | 04.10.19 14:26 |      |

## Surrogate

|                      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 99      |         | 97       |          | 70-130 | %     | 04.10.19 14:26 |
| 4-Bromofluorobenzene | 99      |         | 98       |          | 70-130 | %     | 04.10.19 14:26 |

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

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

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

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



## Chain of Custody

**Work Order No:**

020315

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) |                          |
| Company Name:    | LT Environmental, Inc., Permian office | Company Name:           | Kyle Lohell<br>X2 Energy |
| Address:         | 3300 North A Street                    | Address:                |                          |
| City, State ZIP: | Midland, TX 79705                      | City, State ZIP:        |                          |
| Phone:           | 432.704.5178                           | Email:                  | alohell@x2energy.com     |

| Work Order Comments                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Program:</b> UST/PST <input type="checkbox"/> RP <input type="checkbox"/> brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>     |  |
| <b>State of Project:</b>                                                                                                                                                             |  |
| <b>Reporting:</b> Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/> |  |
| <b>Deliverables:</b> EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: <input type="text"/>                                                                         |  |

|                 |            |             |                  |                          |  |  |  |  |  |  |  |  |                  |  |
|-----------------|------------|-------------|------------------|--------------------------|--|--|--|--|--|--|--|--|------------------|--|
| Project Name:   | PLU BS 25  | Turn Around | ANALYSIS REQUEST |                          |  |  |  |  |  |  |  |  | Work Order Notes |  |
| Project Number: | 612918093  |             | Routine          | <input type="checkbox"/> |  |  |  |  |  |  |  |  |                  |  |
| P.O. Number:    |            |             | Rush:            | 3 day                    |  |  |  |  |  |  |  |  |                  |  |
| Sampler's Name: | L. Lawbach |             | Due Date:        |                          |  |  |  |  |  |  |  |  |                  |  |

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

for of Containers

(EPA 8015)

(EPA 8021)

(EPA 300.0)

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

[illegible]

**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 SiO<sub>2</sub> Na Sr Ti Sn I I V Zr

**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

of service. Xencro will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated.

| Relinquished by: (Signature)                                                      | Received by: (Signature)                                                          | Date/Time       | Relinquished by: (Signature)                                                        | Received by: (Signature)                                                            | Date/Time |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
|  |  | 04/08/2014 8:30 |  |  | 4/8/14    |
|                                                                                   |                                                                                   |                 |                                                                                     |                                                                                     | 1355      |
|                                                                                   |                                                                                   |                 |                                                                                     |                                                                                     |           |
|                                                                                   |                                                                                   |                 |                                                                                     |                                                                                     |           |
|                                                                                   |                                                                                   |                 |                                                                                     |                                                                                     |           |



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/08/2019 01:55:00 PM

Work Order #: 620365

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

**Sample Receipt Checklist****Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 04/08/2019

Checklist reviewed by:

Kalei Stout

Date: 04/08/2019



# Analytical Report 621702

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV BS 005H**

---

**23-APR-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



23-APR-19

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

Reference: XENCO Report No(s): **621702**  
**PLU CVX JV BS 005H**  
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) 621702. 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. 621702 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

**Kalei Stout**

Midland Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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

**Sample Cross Reference 621702****LT Environmental, Inc., Arvada, CO**

PLU CVX JV BS 005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| PH05      | S      | 04-17-19 16:30 | 3.5 ft       | 621702-001    |
| PH05A     | S      | 04-17-19 16:50 | 6.5 ft       | 621702-002    |
| PH06      | S      | 04-17-19 13:20 | 0.5 ft       | 621702-003    |
| PH06A     | S      | 04-17-19 13:45 | 2.5 ft       | 621702-004    |
| PH07      | S      | 04-17-19 11:10 | 3.0 ft       | 621702-005    |
| PH07A     | S      | 04-17-19 11:30 | 4.5 ft       | 621702-006    |
| PH08      | S      | 04-17-19 12:10 | 6.0 ft       | 621702-007    |
| PH08A     | S      | 04-17-19 12:55 | 11.0 ft      | 621702-008    |
| PH06B     | S      | 04-17-19 13:55 | 6.5 ft       | 621702-009    |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: PLU CVX JV BS 005H**Project ID: ---  
Work Order Number(s): 621702Report Date: 23-APR-19  
Date Received: 04/19/2019**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3086496 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: 621702-002,621702-008,621702-004.

Batch: LBA-3086499 BTEX by EPA 8021B

Lab Sample ID 621702-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 621702-009.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 621702-009 SD.

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

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 621702-009

Batch: LBA-3086560 Chloride by EPA 300

Lab Sample ID 621702-002 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: 621702-001, -002, -003, -004, -005, -006, -007, -008, -009.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 621702

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 005H

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

**Date Received in Lab:** Fri Apr-19-19 12:00 pm  
**Report Date:** 23-APR-19  
**Project Manager:** Kalei Stout

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 621702-001       | 621702-002       | 621702-003       | 621702-004       | 621702-005       | 621702-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | PH05             | PH05A            | PH06             | PH06A            | PH07             | PH07A            |
|                                    | <i>Depth:</i>     | 3.5- ft          | 6.5- ft          | 0.5- ft          | 2.5- ft          | 3.0- ft          | 4.5- ft          |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Apr-17-19 16:30  | Apr-17-19 16:50  | Apr-17-19 13:20  | Apr-17-19 13:45  | Apr-17-19 11:10  | Apr-17-19 11:30  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  |
|                                    | <i>Analyzed:</i>  | Apr-19-19 20:42  | Apr-19-19 21:01  | Apr-19-19 21:20  | Apr-19-19 21:39  | Apr-19-19 21:58  | Apr-19-19 22:17  |
|                                    | <i>Units/RL:</i>  | 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                        |                   | <0.00400 0.00400 | <0.00402 0.00402 | <0.00398 0.00398 | <0.00401 0.00401 | <0.00400 0.00400 | <0.00400 0.00400 |
| 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 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Apr-19-19 16:00  | Apr-19-19 16:00  | Apr-19-19 16:00  | Apr-19-19 16:00  | Apr-19-19 16:00  | Apr-19-19 16:00  |
|                                    | <i>Analyzed:</i>  | Apr-22-19 16:44  | Apr-22-19 16:59  | Apr-22-19 16:52  | Apr-22-19 17:21  | Apr-22-19 17:28  | Apr-23-19 09:34  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 188 5.00         | 191 5.03         | 1140 4.98        | 308 4.99         | 226 5.04         | 228 4.95         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Apr-20-19 09:00  | Apr-20-19 09:00  | Apr-20-19 09:00  | Apr-20-19 09:00  | Apr-20-19 09:00  | Apr-20-19 09:00  |
|                                    | <i>Analyzed:</i>  | Apr-20-19 16:14  | Apr-20-19 16:34  | Apr-20-19 17:32  | Apr-20-19 17:52  | Apr-20-19 18:12  | Apr-20-19 18:32  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |
| Total GRO-DRO                      |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout  
Midland Laboratory Director



# Certificate of Analysis Summary 621702

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 005H

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

**Date Received in Lab:** Fri Apr-19-19 12:00 pm  
**Report Date:** 23-APR-19  
**Project Manager:** Kalei Stout

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 621702-007       | 621702-008       | 621702-009       |  |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|--|--|--|
|                                    | <i>Field Id:</i>  | PH08             | PH08A            | PH06B            |  |  |  |
|                                    | <i>Depth:</i>     | 6.0- ft          | 11.0- ft         | 6.5- ft          |  |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             |  |  |  |
|                                    | <i>Sampled:</i>   | Apr-17-19 12:10  | Apr-17-19 12:55  | Apr-17-19 13:55  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:30  |  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-19-19 22:36  | Apr-19-19 22:55  | Apr-20-19 01:43  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Benzene                            |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| Toluene                            |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| Ethylbenzene                       |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| m,p-Xylenes                        |                   | <0.00403 0.00403 | <0.00398 0.00398 | <0.00402 0.00402 |  |  |  |
| o-Xylene                           |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| Total Xylenes                      |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| Total BTEX                         |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 |  |  |  |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Apr-19-19 16:00  | Apr-19-19 16:00  | Apr-19-19 16:00  |  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-23-19 09:39  | Apr-23-19 09:44  | Apr-23-19 09:49  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Chloride                           |                   | 300 4.98         | 101 4.96         | 62.6 4.95        |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Apr-20-19 09:00  | Apr-20-19 09:00  | Apr-20-19 09:00  |  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-20-19 18:52  | Apr-20-19 19:11  | Apr-20-19 19:30  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |  |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |  |
| Total GRO-DRO                      |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kalei Stout  
Midland Laboratory Director





# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH05**  
Lab Sample Id: 621702-001

Matrix: Soil  
Date Collected: 04.17.19 16.30

Date Received: 04.19.19 12.00  
Sample Depth: 3.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 188    | 5.00 | mg/kg | 04.22.19 16.44 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 16.14 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 16.14 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 16.14 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 16.14 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 16.14 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 04.20.19 16.14 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 04.20.19 16.14 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH05**  
Lab Sample Id: 621702-001

Matrix: Soil  
Date Collected: 04.17.19 16.30

Date Received: 04.19.19 12.00  
Sample Depth: 3.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 20.42       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 127               | %            | 70-130        | 04.19.19 20.42       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 04.19.19 20.42       |             |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH05A**  
Lab Sample Id: 621702-002

Matrix: Soil  
Date Collected: 04.17.19 16.50

Date Received: 04.19.19 12.00  
Sample Depth: 6.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 191    | 5.03 | mg/kg | 04.22.19 16.59 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 16.34 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 16.34 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 16.34 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 16.34 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 16.34 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 04.20.19 16.34 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 04.20.19 16.34 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH05A**  
Lab Sample Id: 621702-002

Matrix: Soil  
Date Collected: 04.17.19 16.50

Date Received: 04.19.19 12.00  
Sample Depth: 6.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.19.19 21.01       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 04.19.19 21.01       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 151               | %            | 70-130        | 04.19.19 21.01       | **          |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06**  
Lab Sample Id: 621702-003

Matrix: Soil  
Date Collected: 04.17.19 13.20

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1140   | 4.98 | mg/kg | 04.22.19 16.52 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 17.32 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 17.32 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 17.32 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 17.32 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 17.32 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 04.20.19 17.32 |      |
| o-Terphenyl    | 84-15-1    | 90         | %     | 70-135 | 04.20.19 17.32 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06**  
Lab Sample Id: 621702-003

Matrix: Soil  
Date Collected: 04.17.19 13.20

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 04.19.19 21.20       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 04.19.19 21.20       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 124               | %            | 70-130        | 04.19.19 21.20       |             |     |





# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06A**  
Lab Sample Id: 621702-004

Matrix: Soil  
Date Collected: 04.17.19 13.45

Date Received: 04.19.19 12.00  
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 308    | 4.99 | mg/kg | 04.22.19 17.21 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 17.52 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 17.52 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 17.52 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 17.52 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 17.52 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 91         | %     | 70-135 | 04.20.19 17.52 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 04.20.19 17.52 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06A**  
Lab Sample Id: 621702-004

Matrix: Soil  
Date Collected: 04.17.19 13.45

Date Received: 04.19.19 12.00  
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086496

Date Prep: 04.19.19 13.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.39       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 94                | %            | 70-130        | 04.19.19 21.39       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 133               | %            | 70-130        | 04.19.19 21.39       | **          |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH07**  
Lab Sample Id: 621702-005

Matrix: Soil  
Date Collected: 04.17.19 11.10

Date Received: 04.19.19 12.00  
Sample Depth: 3.0 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 226    | 5.04 | mg/kg | 04.22.19 17.28 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 18.12 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 18.12 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 18.12 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 18.12 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 18.12 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 86         | %     | 70-135 | 04.20.19 18.12 |      |
| o-Terphenyl    | 84-15-1    | 86         | %     | 70-135 | 04.20.19 18.12 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH07**  
Lab Sample Id: 621702-005

Matrix: Soil  
Date Collected: 04.17.19 11.10

Date Received: 04.19.19 12.00  
Sample Depth: 3.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086496

Prep Method: SW5030B

% Moisture:

Date Prep: 04.19.19 13.15

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 21.58       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 126               | %            | 70-130        | 04.19.19 21.58       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 04.19.19 21.58       |             |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH07A**  
Lab Sample Id: 621702-006

Matrix: Soil  
Date Collected: 04.17.19 11.30

Date Received: 04.19.19 12.00  
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 228    | 4.95 | mg/kg | 04.23.19 09.34 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 18.32 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 18.32 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 18.32 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 18.32 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 18.32 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 91         | %     | 70-135 | 04.20.19 18.32 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 04.20.19 18.32 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH07A**  
Lab Sample Id: 621702-006

Matrix: Soil  
Date Collected: 04.17.19 11.30

Date Received: 04.19.19 12.00  
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086496

Prep Method: SW5030B

% Moisture:

Date Prep: 04.19.19 13.15

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 22.17       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 04.19.19 22.17       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 125               | %            | 70-130        | 04.19.19 22.17       |             |     |





# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH08**  
Lab Sample Id: 621702-007

Matrix: Soil  
Date Collected: 04.17.19 12.10

Date Received: 04.19.19 12.00  
Sample Depth: 6.0 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 300    | 4.98 | mg/kg | 04.23.19 09.39 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 18.52 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 18.52 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 18.52 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 18.52 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 18.52 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 91         | %     | 70-135 | 04.20.19 18.52 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 04.20.19 18.52 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH08**  
Lab Sample Id: 621702-007

Matrix: Soil  
Date Collected: 04.17.19 12.10

Date Received: 04.19.19 12.00  
Sample Depth: 6.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086496

Prep Method: SW5030B

% Moisture:

Date Prep: 04.19.19 13.15

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 04.19.19 22.36       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 126               | %            | 70-130        | 04.19.19 22.36       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 04.19.19 22.36       |             |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH08A**  
Lab Sample Id: 621702-008

Matrix: Soil  
Date Collected: 04.17.19 12.55

Date Received: 04.19.19 12.00  
Sample Depth: 11.0 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 101    | 4.96 | mg/kg | 04.23.19 09.44 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 19.11 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 19.11 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 19.11 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 19.11 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 19.11 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 04.20.19 19.11 |      |
| o-Terphenyl    | 84-15-1    | 92         | %     | 70-135 | 04.20.19 19.11 |      |



## Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH08A**  
 Lab Sample Id: 621702-008

Matrix: Soil  
 Date Collected: 04.17.19 12.55

Date Received: 04.19.19 12.00  
 Sample Depth: 11.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 04.19.19 22.55       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 04.19.19 22.55       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 155               | %            | 70-130        | 04.19.19 22.55       | **          |     |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06B**  
Lab Sample Id: 621702-009

Matrix: Soil  
Date Collected: 04.17.19 13.55

Date Received: 04.19.19 12.00  
Sample Depth: 6.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086560

Date Prep: 04.19.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 62.6   | 4.95 | mg/kg | 04.23.19 09.49 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086487

Date Prep: 04.20.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 04.20.19 19.30 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 04.20.19 19.30 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 04.20.19 19.30 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 04.20.19 19.30 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <14.9  | 14.9 | mg/kg | 04.20.19 19.30 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 04.20.19 19.30 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 04.20.19 19.30 |      |



# Certificate of Analytical Results 621702



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH06B**  
Lab Sample Id: 621702-009

Matrix: Soil  
Date Collected: 04.17.19 13.55

Date Received: 04.19.19 12.00  
Sample Depth: 6.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.30

Basis: Wet Weight

Seq Number: 3086499

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.20.19 01.43       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 115               | %            | 70-130        | 04.20.19 01.43       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 04.20.19 01.43       |             |     |





## 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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: Chloride by EPA 300

Seq Number: 3086560

MB Sample Id: 7676198-1-BLK

Matrix: Solid

LCS Sample Id: 7676198-1-BKS

Prep Method: E300P

Date Prep: 04.19.19

LCSD Sample Id: 7676198-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 1.75      | 250          | 271        | 108      | 271         | 108       | 90-110 | 0    | 20        | mg/kg | 04.22.19 13:13 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086560

Parent Sample Id: 621700-002

Matrix: Soil

MS Sample Id: 621700-002 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621700-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 997           | 248          | 1230      | 94      | 1240       | 98       | 90-110 | 1    | 20        | mg/kg | 04.22.19 15:20 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086560

Parent Sample Id: 621702-002

Matrix: Soil

MS Sample Id: 621702-002 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621702-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 191           | 252          | 480       | 115     | 500        | 123      | 90-110 | 4    | 20        | mg/kg | 04.22.19 17:06 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086487

MB Sample Id: 7676240-1-BLK

Matrix: Solid

LCS Sample Id: 7676240-1-BKS

Prep Method: TX1005P

Date Prep: 04.20.19

LCSD Sample Id: 7676240-1-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         | 919        | 92       | 933         | 93        | 70-135 | 2    | 20        | mg/kg | 04.20.19 12:20 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 935        | 94       | 957         | 96        | 70-135 | 2    | 20        | mg/kg | 04.20.19 12:20 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 94      |         | 117      |          | 118       |           | 70-135 | %     | 04.20.19 12:20 |
| o-Terphenyl    | 95      |         | 110      |          | 113       |           | 70-135 | %     | 04.20.19 12:20 |

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086487

Parent Sample Id: 621700-001

Matrix: Soil

MS Sample Id: 621700-001 S

Prep Method: TX1005P

Date Prep: 04.20.19

MSD Sample Id: 621700-001 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) | 9.25          | 1000         | 862       | 85      | 868        | 86       | 70-135 | 1    | 20        | mg/kg | 04.20.19 13:18 |      |
| Diesel Range Organics (DRO)       | <8.13         | 1000         | 894       | 89      | 896        | 90       | 70-135 | 0    | 20        | mg/kg | 04.20.19 13:18 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 114     |         | 115      |          | 70-135 | %     | 04.20.19 13:18 |
| o-Terphenyl    | 107     |         | 113      |          | 70-135 | %     | 04.20.19 13:18 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086496

MB Sample Id: 7676257-1-BLK

Matrix: Solid

LCS Sample Id: 7676257-1-BKS

Prep Method: SW5030B

Date Prep: 04.19.19

LCSD Sample Id: 7676257-1-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       | 0.0914     | 92       | 0.0932      | 93        | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| Toluene      | <0.00199  | 0.0996       | 0.0968     | 97       | 0.0983      | 98        | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| Ethylbenzene | <0.00199  | 0.0996       | 0.103      | 103      | 0.105       | 105       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.209      | 105      | 0.212       | 106       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:07 |      |
| o-Xylene     | <0.00199  | 0.0996       | 0.106      | 106      | 0.108       | 108       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 104     |         | 95       |          | 95        |           | 70-130 | %     | 04.19.19 14:07 |
| 4-Bromofluorobenzene | 111     |         | 108      |          | 108       |           | 70-130 | %     | 04.19.19 14:07 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086499

MB Sample Id: 7676259-1-BLK

Matrix: Solid

LCS Sample Id: 7676259-1-BKS

Prep Method: SW5030B

Date Prep: 04.19.19

LCSD Sample Id: 7676259-1-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       | 0.0911     | 91       | 0.0925      | 93        | 70-130 | 2    | 35        | mg/kg | 04.19.19 23:51 |      |
| Toluene      | <0.00199  | 0.0996       | 0.0952     | 96       | 0.0961      | 96        | 70-130 | 1    | 35        | mg/kg | 04.19.19 23:51 |      |
| Ethylbenzene | <0.00199  | 0.0996       | 0.101      | 101      | 0.102       | 102       | 70-130 | 1    | 35        | mg/kg | 04.19.19 23:51 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.202      | 102      | 0.204       | 102       | 70-130 | 1    | 35        | mg/kg | 04.19.19 23:51 |      |
| o-Xylene     | <0.00199  | 0.0996       | 0.104      | 104      | 0.105       | 105       | 70-130 | 1    | 35        | mg/kg | 04.19.19 23:51 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 106     |         | 96       |          | 95        |           | 70-130 | %     | 04.19.19 23:51 |
| 4-Bromofluorobenzene | 106     |         | 107      |          | 107       |           | 70-130 | %     | 04.19.19 23:51 |

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086496

Parent Sample Id: 621719-001

Matrix: Soil

MS Sample Id: 621719-001 S

Prep Method: SW5030B

Date Prep: 04.19.19

MSD Sample Id: 621719-001 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       | 0.0813    | 82      | 0.0829     | 83       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:45 |      |
| Toluene      | 0.000543      | 0.0994       | 0.0865    | 86      | 0.0874     | 87       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:45 |      |
| Ethylbenzene | <0.000561     | 0.0994       | 0.0917    | 92      | 0.0925     | 93       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:45 |      |
| m,p-Xylenes  | <0.00101      | 0.199        | 0.187     | 94      | 0.187      | 94       | 70-130 | 0    | 35        | mg/kg | 04.19.19 14:45 |      |
| o-Xylene     | 0.000413      | 0.0994       | 0.0950    | 95      | 0.0954     | 95       | 70-130 | 0    | 35        | mg/kg | 04.19.19 14:45 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 96       |          | 70-130 | %     | 04.19.19 14:45 |
| 4-Bromofluorobenzene | 113     |         | 112      |          | 70-130 | %     | 04.19.19 14:45 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086499

Parent Sample Id: 621702-009

Matrix: Soil

MS Sample Id: 621702-009 S

Prep Method: SW5030B

Date Prep: 04.19.19

MSD Sample Id: 621702-009 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        | 0.0775    | 77      | 0.0351     | 35       | 70-130 | 75   | 35        | mg/kg | 04.20.19 00:29 | XF   |
| Toluene      | <0.000459     | 0.101        | 0.0835    | 83      | 0.0499     | 50       | 70-130 | 50   | 35        | mg/kg | 04.20.19 00:29 | XF   |
| Ethylbenzene | <0.000569     | 0.101        | 0.0890    | 88      | 0.0573     | 58       | 70-130 | 43   | 35        | mg/kg | 04.20.19 00:29 | XF   |
| m,p-Xylenes  | <0.00102      | 0.202        | 0.180     | 89      | 0.114      | 58       | 70-130 | 45   | 35        | mg/kg | 04.20.19 00:29 | XF   |
| o-Xylene     | <0.000347     | 0.101        | 0.0929    | 92      | 0.0610     | 61       | 70-130 | 41   | 35        | mg/kg | 04.20.19 00:29 | XF   |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 91       |          | 70-130 | %     | 04.20.19 00:29 |
| 4-Bromofluorobenzene | 115     |         | 132      | **       | 70-130 | %     | 04.20.19 00:29 |

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







# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/19/2019 12:00:00 PM

Work Order #: 621702

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: 04/19/2019

Checklist reviewed by:

Kalei Stout

Date: 04/19/2019



# Analytical Report 621114

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CNXJUBS #005H**

---

**17-APR-19**

Collected By: Client



**1089 N Canal Street  
Carlsbad, NM 88220**

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)



17-APR-19

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

Reference: XENCO Report No(s): **621114**  
**PLU CNXJUBS #005H**  
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) 621114. 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. 621114 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

**Kalei Stout**

Carlsbad Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 621114

LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW12      | S      | 04-12-19 13:35 | 0 - 4 ft     | 621114-001    |
| PH09      | S      | 04-12-19 11:40 | 4.5 ft       | 621114-002    |
| PH09A     | S      | 04-12-19 11:55 | 7.5 ft       | 621114-003    |
| PH10      | S      | 04-12-19 12:40 | 8.5 ft       | 621114-004    |
| PH10A     | S      | 04-12-19 12:55 | 12.5 ft      | 621114-005    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CNXJUBS #005H**

Project ID: ---  
Work Order Number(s): 621114

Report Date: 17-APR-19  
Date Received: 04/15/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3085873 BTEX by EPA 8021B

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

Batch: LBA-3086010 Inorganic Anions by EPA 300

Lab Sample ID 621239-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 621114-001, -002, -003, -004, -005.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 621114

LT Environmental, Inc., Arvada, CO

Project Name: PLU CNXJUBS #005H

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

Date Received in Lab: Mon Apr-15-19 11:20 am  
Report Date: 17-APR-19  
Project Manager: Kalei Stout

| <i>Analysis Requested</i>                            | <i>Lab Id:</i>    | 621114-001       | 621114-002       | 621114-003       | 621114-004       | 621114-005       |  |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|--|
|                                                      | <i>Field Id:</i>  | SW12             | PH09             | PH09A            | PH10             | PH10A            |  |
|                                                      | <i>Depth:</i>     | 0-4 ft           | 4.5- ft          | 7.5- ft          | 8.5- ft          | 12.5- ft         |  |
|                                                      | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |  |
|                                                      | <i>Sampled:</i>   | Apr-12-19 13:35  | Apr-12-19 11:40  | Apr-12-19 11:55  | Apr-12-19 12:40  | Apr-12-19 12:55  |  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-18-16</b>   | <i>Extracted:</i> | Apr-16-19 12:45  | Apr-16-19 12:45  | Apr-16-19 12:45  | Apr-16-19 12:45  | Apr-16-19 12:45  |  |
|                                                      | <i>Analyzed:</i>  | Apr-16-19 16:57  | Apr-16-19 17:16  | Apr-16-19 17:35  | Apr-16-19 17:54  | Apr-16-19 18:13  |  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |
| Benzene                                              |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| Toluene                                              |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| Ethylbenzene                                         |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| m,p-Xylenes                                          |                   | <0.00402 0.00402 | <0.00400 0.00400 | <0.00398 0.00398 | <0.00403 0.00403 | <0.00399 0.00399 |  |
| o-Xylene                                             |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| Total Xylenes                                        |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| Total BTEX                                           |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 |  |
| <b>Chloride by EPA 300<br/>SUB: T104704400-18-16</b> | <i>Extracted:</i> | Apr-16-19 14:00  | Apr-16-19 14:00  | Apr-16-19 14:00  | Apr-16-19 14:00  | Apr-16-19 14:00  |  |
|                                                      | <i>Analyzed:</i>  | Apr-17-19 07:37  | Apr-17-19 07:43  | Apr-17-19 07:50  | Apr-17-19 07:56  | Apr-17-19 08:03  |  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |
| Chloride                                             |                   | 119 5.01         | 1180 24.9        | 40.6 5.00        | 1140 24.8        | 108 4.96         |  |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-18-16</b>   | <i>Extracted:</i> | Apr-16-19 17:00  | Apr-16-19 17:00  | Apr-16-19 17:00  | Apr-16-19 17:00  | Apr-16-19 17:00  |  |
|                                                      | <i>Analyzed:</i>  | Apr-16-19 21:36  | Apr-16-19 22:35  | Apr-16-19 22:54  | Apr-16-19 23:14  | Apr-16-19 23:33  |  |
|                                                      | <i>Units/RL:</i>  | 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       |  |
| Diesel Range Organics (DRO)                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |
| Total TPH                                            |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |
| Total GRO-DRO                                        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout  
Carlsbad Laboratory Director



# Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **SW12**  
Lab Sample Id: 621114-001

Matrix: Soil  
Date Collected: 04.12.19 13.35

Date Received: 04.15.19 11.20  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 119    | 5.01 | mg/kg | 04.17.19 07.37 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.16.19 21.36 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.16.19 21.36 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.16.19 21.36 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.16.19 21.36 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.16.19 21.36 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 04.16.19 21.36 |      |
| o-Terphenyl    | 84-15-1    | 96         | %     | 70-135 | 04.16.19 21.36 |      |





# Certificate of Analytical Results 621114

**LT Environmental, Inc., Arvada, CO**

PLU CNXJUBS #005H

Sample Id: **SW12**  
Lab Sample Id: 621114-001

Matrix: Soil  
Date Collected: 04.12.19 13.35

Date Received: 04.15.19 11.20  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085873

Prep Method: SW5030B

% Moisture:

Date Prep: 04.16.19 12.45

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.16.19 16.57       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 04.16.19 16.57       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 109               | %            | 70-130        | 04.16.19 16.57       |             |     |



# Certificate of Analytical Results 621114

LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH09**  
Lab Sample Id: 621114-002

Matrix: Soil  
Date Collected: 04.12.19 11.40

Date Received: 04.15.19 11.20  
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1180   | 24.9 | mg/kg | 04.17.19 07.43 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.16.19 22.35 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.16.19 22.35 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.16.19 22.35 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.16.19 22.35 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.16.19 22.35 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 102        | %     | 70-135 | 04.16.19 22.35 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 04.16.19 22.35 |      |



# Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH09**  
Lab Sample Id: 621114-002

Matrix: Soil  
Date Collected: 04.12.19 11.40

Date Received: 04.15.19 11.20  
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085873

Date Prep: 04.16.19 12.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.16.19 17.16       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 114               | %            | 70-130        | 04.16.19 17.16       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 04.16.19 17.16       |             |     |



# Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH09A** Matrix: Soil Date Received: 04.15.19 11.20  
 Lab Sample Id: 621114-003 Date Collected: 04.12.19 11.55 Sample Depth: 7.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 04.16.19 14.00 Basis: Wet Weight  
 Seq Number: 3086010 SUB: T104704400-18-16

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 40.6   | 5.00 | mg/kg | 04.17.19 07.50 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 04.16.19 17.00 Basis: Wet Weight  
 Seq Number: 3085983 SUB: T104704400-18-16

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.16.19 22.54 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.16.19 22.54 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.16.19 22.54 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.16.19 22.54 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.16.19 22.54 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 104        | %     | 70-135 | 04.16.19 22.54 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 04.16.19 22.54 |      |



## Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH09A**  
 Lab Sample Id: 621114-003

Matrix: Soil  
 Date Collected: 04.12.19 11.55

Date Received: 04.15.19 11.20  
 Sample Depth: 7.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085873

SUB: T104704400-18-16

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 04.16.19 17.35       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 112               | %            | 70-130        | 04.16.19 17.35       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 04.16.19 17.35       |             |     |



# Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH10**  
Lab Sample Id: 621114-004

Matrix: Soil  
Date Collected: 04.12.19 12.40

Date Received: 04.15.19 11.20  
Sample Depth: 8.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1140   | 24.8 | mg/kg | 04.17.19 07.56 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.16.19 23.14 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.16.19 23.14 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.16.19 23.14 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.16.19 23.14 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.16.19 23.14 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 04.16.19 23.14 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 04.16.19 23.14 |      |





## Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH10**  
 Lab Sample Id: 621114-004

Matrix: Soil  
 Date Collected: 04.12.19 12.40

Date Received: 04.15.19 11.20  
 Sample Depth: 8.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085873

SUB: T104704400-18-16

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 04.16.19 17.54       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 106               | %            | 70-130        | 04.16.19 17.54       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 113               | %            | 70-130        | 04.16.19 17.54       |             |     |



## Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH10A**  
 Lab Sample Id: 621114-005

Matrix: Soil  
 Date Collected: 04.12.19 12.55

Date Received: 04.15.19 11.20  
 Sample Depth: 12.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 108    | 4.96 | mg/kg | 04.17.19 08.03 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.16.19 23.33 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.16.19 23.33 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.16.19 23.33 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.16.19 23.33 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.16.19 23.33 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 04.16.19 23.33 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 04.16.19 23.33 |      |



# Certificate of Analytical Results 621114

## LT Environmental, Inc., Arvada, CO

PLU CNXJUBS #005H

Sample Id: **PH10A**  
Lab Sample Id: 621114-005

Matrix: Soil  
Date Collected: 04.12.19 12.55

Date Received: 04.15.19 11.20  
Sample Depth: 12.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085873

Prep Method: SW5030B

% Moisture:

Date Prep: 04.16.19 12.45

Basis: Wet Weight

SUB: T104704400-18-16

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.16.19 18.13       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 04.16.19 18.13       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 125               | %            | 70-130        | 04.16.19 18.13       |             |     |



## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

**+** NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
PLU CNXJUBS #005H

**Analytical Method: Chloride by EPA 300**

Seq Number: 3086010

MB Sample Id: 7675970-1-BLK

Matrix: Solid

LCS Sample Id: 7675970-1-BKS

Prep Method: E300P

Date Prep: 04.16.19

LCSD Sample Id: 7675970-1-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          | 254        | 102      | 251         | 100       | 90-110 | 1    | 20        | mg/kg | 04.16.19 16:12 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3086010

Parent Sample Id: 621114-005

Matrix: Soil

MS Sample Id: 621114-005 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621114-005 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 108           | 248          | 348       | 97      | 323        | 87       | 90-110 | 7    | 20        | mg/kg | 04.17.19 08:09 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3086010

Parent Sample Id: 621239-001

Matrix: Soil

MS Sample Id: 621239-001 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621239-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 141           | 250          | 395       | 102     | 390        | 100      | 90-110 | 1    | 20        | mg/kg | 04.16.19 16:31 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3085983

MB Sample Id: 7675909-1-BLK

Matrix: Solid

LCS Sample Id: 7675909-1-BKS

Prep Method: TX1005P

Date Prep: 04.16.19

LCSD Sample Id: 7675909-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <8.00     | 1000         | 1060       | 106      | 993         | 99        | 70-135 | 7    | 20        | mg/kg | 04.16.19 20:57 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 1090       | 109      | 1010        | 101       | 70-135 | 8    | 20        | mg/kg | 04.16.19 20:57 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 114     |         | 129      |          | 128       |           | 70-135 | %     | 04.16.19 20:57 |
| o-Terphenyl    | 115     |         | 118      |          | 125       |           | 70-135 | %     | 04.16.19 20:57 |

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



## LT Environmental, Inc.

PLU CNXJUBS #005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3085983

Parent Sample Id: 621114-001

Matrix: Soil

MS Sample Id: 621114-001 S

Prep Method: TX1005P

Date Prep: 04.16.19

MSD Sample Id: 621114-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | 12.7          | 999          | 1000      | 99      | 1000       | 99       | 70-135 | 0    | 20        | mg/kg | 04.16.19 21:56 |      |
| Diesel Range Organics (DRO)       | 13.9          | 999          | 1050      | 104     | 1060       | 105      | 70-135 | 1    | 20        | mg/kg | 04.16.19 21:56 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 125     |         | 122      |          | 70-135 | %     | 04.16.19 21:56 |
| o-Terphenyl    | 123     |         | 113      |          | 70-135 | %     | 04.16.19 21:56 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3085873

MB Sample Id: 7675873-1-BLK

Matrix: Solid

LCS Sample Id: 7675873-1-BKS

Prep Method: SW5030B

Date Prep: 04.16.19

LCSD Sample Id: 7675873-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000381 | 0.0990       | 0.0974     | 98       | 0.0993      | 99        | 70-130 | 2    | 35        | mg/kg | 04.16.19 09:03 |      |
| Toluene      | 0.000579  | 0.0990       | 0.0995     | 101      | 0.102       | 102       | 70-130 | 2    | 35        | mg/kg | 04.16.19 09:03 |      |
| Ethylbenzene | <0.000559 | 0.0990       | 0.105      | 106      | 0.108       | 108       | 70-130 | 3    | 35        | mg/kg | 04.16.19 09:03 |      |
| m,p-Xylenes  | <0.00100  | 0.198        | 0.213      | 108      | 0.217       | 109       | 70-130 | 2    | 35        | mg/kg | 04.16.19 09:03 |      |
| o-Xylene     | 0.000439  | 0.0990       | 0.107      | 108      | 0.109       | 109       | 70-130 | 2    | 35        | mg/kg | 04.16.19 09:03 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 102     |         | 95       |          | 96        |           | 70-130 | %     | 04.16.19 09:03 |
| 4-Bromofluorobenzene | 109     |         | 106      |          | 108       |           | 70-130 | %     | 04.16.19 09:03 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3085873

Parent Sample Id: 621041-010

Matrix: Soil

MS Sample Id: 621041-010 S

Prep Method: SW5030B

Date Prep: 04.16.19

MSD Sample Id: 621041-010 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00202      | 0.101        | 0.0899    | 89      | 0.0919     | 92       | 70-130 | 2    | 35        | mg/kg | 04.16.19 09:41 |      |
| Toluene      | <0.000460     | 0.101        | 0.0892    | 88      | 0.0900     | 91       | 70-130 | 1    | 35        | mg/kg | 04.16.19 09:41 |      |
| Ethylbenzene | <0.000570     | 0.101        | 0.0923    | 91      | 0.0930     | 94       | 70-130 | 1    | 35        | mg/kg | 04.16.19 09:41 |      |
| m,p-Xylenes  | <0.00102      | 0.202        | 0.185     | 92      | 0.186      | 93       | 70-130 | 1    | 35        | mg/kg | 04.16.19 09:41 |      |
| o-Xylene     | <0.00202      | 0.101        | 0.0932    | 92      | 0.0936     | 94       | 70-130 | 0    | 35        | mg/kg | 04.16.19 09:41 |      |

## Surrogate

|                      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 99      |         | 100      |          | 70-130 | %     | 04.16.19 09:41 |
| 4-Bromofluorobenzene | 110     |         | 110      |          | 70-130 | %     | 04.16.19 09:41 |

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

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

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

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





## Chain of Custody

Work Order No: 621114

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 Litchell         |
| Company Name:    | LT Environmental, Inc., Permian office | Company Name:           | XTD                   |
| Address:         | 3300 North A Street                    | Address:                | 8104 E. Greene Street |
| City, State ZIP: | Midland, TX 79705                      | City, State ZIP:        | Causeway NM 88220     |
| Phone:           | 432.704.5178                           | Email:                  | abaker@ltenv.com      |

|                                                                                                                                                                                                 |                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/><br>State of Project: |                                                                                                           |
| Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>                  | Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="checkbox"/> |

|                 |                     |                                  |  |
|-----------------|---------------------|----------------------------------|--|
| Project Name:   | PLU CLK JV BS #005H | Turn Around                      |  |
| Project Number: | 41                  | Routine <input type="checkbox"/> |  |
| P.O. Number:    | 2022526             | Rush: Same day                   |  |
| Sampler's Name: | Ameyers             | Due Date:                        |  |

|                       |                                                                         |                    |                                                                     |
|-----------------------|-------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------|
| SAMPLE RECEIPT        |                                                                         |                    |                                                                     |
| Temperature (°C):     | 41.5                                                                    | Temp Blank:        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Received Intact:      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>     | Thermometer ID     | TN14004                                                             |
| Cooler Custody Seals: | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Correction Factor: | N/A                                                                 |
| Sample Custody Seals: | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Total Containers:  | 5                                                                   |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | ANALYSIS REQUEST     |                |                   |                      |  |  |  |  |  |  | Work Order Notes |
|-----------------------|--------|--------------|--------------|-------|----------------------|----------------|-------------------|----------------------|--|--|--|--|--|--|------------------|
|                       |        |              |              |       | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |                  |
| SW12                  | S      | 4/12/19      | 1335         | 0-4'  | 1                    |                |                   |                      |  |  |  |  |  |  |                  |
| PHD9                  | S      |              | 1140         | 4.5'  | 1                    |                |                   |                      |  |  |  |  |  |  |                  |
| PHO9A                 | S      |              | 1155         | 7.5'  | 1                    |                |                   |                      |  |  |  |  |  |  |                  |
| PH10                  | S      |              | 1240         | 8.5'  | 1                    |                |                   |                      |  |  |  |  |  |  |                  |
| PH10A                 | S      |              | 1255         | 12.5' | 1                    |                |                   |                      |  |  |  |  |  |  |                  |

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti 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 Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |                |                              |                          |               |
|------------------------------|--------------------------|----------------|------------------------------|--------------------------|---------------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time      | Relinquished by: (Signature) | Received by: (Signature) | Date/Time     |
| Ameyers                      | Ameyers                  | 4/15/19 @ 0700 | Ameyers                      | Ameyers                  | 04/15/2011:20 |



## Inter-Office Shipment

Page 1 of 1

IOS Number **37078**

Date/Time: 04/15/19 13:53

Created by: John Builes

Please send report to: Kalei Stout

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: kalei.stout@xenco.com

| Sample Id  | Matrix | Client Sample Id | Sample Collection | Method       | Method Name         | Lab Due  | HT Due   | PM  | Analytes             | Sign |
|------------|--------|------------------|-------------------|--------------|---------------------|----------|----------|-----|----------------------|------|
| 621114-001 | S      | SW12             | 04/12/19 13:35    | E300_CL      | Chloride by EPA 300 | 04/12/19 | 05/10/19 | KLS | CL                   |      |
| 621114-001 | S      | SW12             | 04/12/19 13:35    | SW8021B      | BTEX by EPA 8021B   | 04/12/19 | 04/26/19 | KLS | BR4FBZ BZ BZME EBZ X |      |
| 621114-001 | S      | SW12             | 04/12/19 13:35    | SW8015MOD_NM | TPH by SW8015 Mod   | 04/12/19 | 04/26/19 | KLS | GRO-DRO PHCC10C28 PF |      |
| 621114-002 | S      | PH09             | 04/12/19 11:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 04/12/19 | 04/26/19 | KLS | GRO-DRO PHCC10C28 PF |      |
| 621114-002 | S      | PH09             | 04/12/19 11:40    | E300_CL      | Chloride by EPA 300 | 04/12/19 | 05/10/19 | KLS | CL                   |      |
| 621114-002 | S      | PH09             | 04/12/19 11:40    | SW8021B      | BTEX by EPA 8021B   | 04/12/19 | 04/26/19 | KLS | BR4FBZ BZ BZME EBZ X |      |
| 621114-003 | S      | PH09A            | 04/12/19 11:55    | E300_CL      | Chloride by EPA 300 | 04/12/19 | 05/10/19 | KLS | CL                   |      |
| 621114-003 | S      | PH09A            | 04/12/19 11:55    | SW8015MOD_NM | TPH by SW8015 Mod   | 04/12/19 | 04/26/19 | KLS | GRO-DRO PHCC10C28 PF |      |
| 621114-003 | S      | PH09A            | 04/12/19 11:55    | SW8021B      | BTEX by EPA 8021B   | 04/12/19 | 04/26/19 | KLS | BR4FBZ BZ BZME EBZ X |      |
| 621114-004 | S      | PH10             | 04/12/19 12:40    | E300_CL      | Chloride by EPA 300 | 04/12/19 | 05/10/19 | KLS | CL                   |      |
| 621114-004 | S      | PH10             | 04/12/19 12:40    | SW8021B      | BTEX by EPA 8021B   | 04/12/19 | 04/26/19 | KLS | BR4FBZ BZ BZME EBZ X |      |
| 621114-004 | S      | PH10             | 04/12/19 12:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 04/12/19 | 04/26/19 | KLS | GRO-DRO PHCC10C28 PF |      |
| 621114-005 | S      | PH10A            | 04/12/19 12:55    | SW8015MOD_NM | TPH by SW8015 Mod   | 04/12/19 | 04/26/19 | KLS | GRO-DRO PHCC10C28 PF |      |
| 621114-005 | S      | PH10A            | 04/12/19 12:55    | E300_CL      | Chloride by EPA 300 | 04/12/19 | 05/10/19 | KLS | CL                   |      |
| 621114-005 | S      | PH10A            | 04/12/19 12:55    | SW8021B      | BTEX by EPA 8021B   | 04/12/19 | 04/26/19 | KLS | BR4FBZ BZ BZME EBZ X |      |

## Inter Office Shipment or Sample Comments:

Relinquished By:

John Builes

Received By:

Brianna Teel

Date Relinquished: 04/15/2019

Date Received: 04/16/2019 12:29

Cooler Temperature:



## XENCO Laboratories

## Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 37078

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: John Builes

Date Sent: 04/15/2019 01:53 PM

Received By: Brianna Teel

Date Received: 04/16/2019 12:29 PM

## Sample Receipt Checklist

## Comments

|                                                           |     |
|-----------------------------------------------------------|-----|
| #1 *Temperature of cooler(s)?                             |     |
| #2 *Shipping container in good condition?                 | Yes |
| #3 *Samples received with appropriate temperature?        | Yes |
| #4 *Custody Seals intact on shipping container/ cooler?   | N/A |
| #5 *Custody Seals Signed and dated for Containers/coolers | N/A |
| #6 *IOS present?                                          | Yes |
| #7 Any missing/extra samples?                             | No  |
| #8 IOS agrees with sample label(s)/matrix?                | Yes |
| #9 Sample matrix/ properties agree with IOS?              | Yes |
| #10 Samples in proper container/ bottle?                  | Yes |
| #11 Samples properly preserved?                           | Yes |
| #12 Sample container(s) intact?                           | Yes |
| #13 Sufficient sample amount for indicated test(s)?       | Yes |
| #14 All samples received within hold time?                | Yes |

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

NonConformance:

Corrective Action Taken:

## Nonconformance Documentation

Contact: \_\_\_\_\_ Contacted by : \_\_\_\_\_ Date: \_\_\_\_\_

Checklist reviewed by:

Brianna Teel

Date: 04/16/2019





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/15/2019 11:20:00 AM

Work Order #: 621114

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

**Sample Receipt Checklist****Comments**

|                                                         |     |
|---------------------------------------------------------|-----|
| #1 *Temperature of cooler(s)?                           | 2.8 |
| #2 *Shipping container in good condition?               | Yes |
| #3 *Samples received on ice?                            | Yes |
| #4 *Custody Seals intact on shipping container/ cooler? | Yes |
| #5 Custody Seals intact on sample bottles?              | Yes |
| #6 *Custody Seals Signed and dated?                     | Yes |
| #7 *Chain of Custody present?                           | Yes |
| #8 Any missing/extra samples?                           | Yes |
| #9 Chain of Custody signed when relinquished/ received? | Yes |
| #10 Chain of Custody agrees with sample labels/matrix?  | Yes |
| #11 Container label(s) legible and intact?              | Yes |
| #12 Samples in proper container/ bottle?                | Yes |
| #13 Samples properly preserved?                         | Yes |
| #14 Sample container(s) intact?                         | Yes |
| #15 Sufficient sample amount for indicated test(s)?     | Yes |
| #16 All samples received within hold time?              | Yes |
| #17 Subcontract of sample(s)?                           | Yes |
| #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:

John Builes

Date: 04/15/2019

Checklist reviewed by:

Kalei Stout

Date: 04/15/2019

# Analytical Report 621718

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV BS 005H**

---

**23-APR-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



23-APR-19

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

Reference: XENCO Report No(s): **621718**  
**PLU CVX JV BS 005H**  
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) 621718. 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. 621718 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

**Kalei Stout**

Midland Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



**Sample Cross Reference 621718****LT Environmental, Inc., Arvada, CO**

PLU CVX JV BS 005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| PH13      | S      | 04-15-19 13:30 | 6.5 ft       | 621718-001    |
| PH13A     | S      | 04-15-19 14:20 | 10.5 ft      | 621718-002    |
| PH12      | S      | 04-15-19 10:50 | 0.5 ft       | 621718-003    |
| PH12A     | S      | 04-15-19 11:15 | 4.5 ft       | 621718-004    |
| PH11      | S      | 04-15-19 09:15 | 4.5 ft       | 621718-005    |
| PH11A     | S      | 04-15-19 10:20 | 11 ft        | 621718-006    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV BS 005H**

Project ID: ---  
Work Order Number(s): 621718

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

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3086479 BTEX by EPA 8021B

Lab Sample ID 621718-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 621718-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene 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.



# Certificate of Analysis Summary 621718

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 005H



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

**Date Received in Lab:** Fri Apr-19-19 12:30 pm  
**Report Date:** 23-APR-19  
**Project Manager:** Kalei Stout

| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 621718-001       | 621718-002       | 621718-003       | 621718-004       | 621718-005       | 621718-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <b>Field Id:</b>  | PH13             | PH13A            | PH12             | PH12A            | PH11             | PH11A            |
|                                    | <b>Depth:</b>     | 6.5- ft          | 10.5- ft         | 0.5- ft          | 4.5- ft          | 4.5- ft          | 11- ft           |
|                                    | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <b>Sampled:</b>   | Apr-15-19 13:30  | Apr-15-19 14:20  | Apr-15-19 10:50  | Apr-15-19 11:15  | Apr-15-19 09:15  | Apr-15-19 10:20  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Apr-19-19 12:45  | Apr-19-19 12:45  | Apr-19-19 12:45  | Apr-19-19 12:45  | Apr-19-19 12:45  | Apr-19-19 12:45  |
|                                    | <b>Analyzed:</b>  | Apr-19-19 15:44  | Apr-19-19 16:03  | Apr-19-19 16:22  | Apr-19-19 16:41  | Apr-19-19 17:00  | Apr-19-19 17:19  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Toluene                            |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Ethylbenzene                       |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| m,p-Xylenes                        |                   | <0.00403 0.00403 | <0.00398 0.00398 | <0.00402 0.00402 | <0.00400 0.00400 | <0.00399 0.00399 | <0.00402 0.00402 |
| o-Xylene                           |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Total Xylenes                      |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Total BTEX                         |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| <b>Chloride by EPA 300</b>         | <b>Extracted:</b> | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  |
|                                    | <b>Analyzed:</b>  | Apr-22-19 09:43  | Apr-22-19 09:51  | Apr-22-19 10:34  | Apr-22-19 10:41  | Apr-22-19 10:48  | Apr-22-19 10:56  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 42.0 5.01        | 118 4.96         | 235 4.96         | 868 4.99         | 471 4.97         | 203 5.04         |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Apr-20-19 11:00  | Apr-20-19 11:00  | Apr-20-19 11:00  | Apr-20-19 11:00  | Apr-20-19 11:00  | Apr-20-19 11:00  |
|                                    | <b>Analyzed:</b>  | Apr-21-19 01:02  | Apr-21-19 01:21  | Apr-21-19 01:41  | Apr-21-19 02:39  | Apr-21-19 02:58  | Apr-21-19 03:18  |
|                                    | <b>Units/RL:</b>  | 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       | <14.9 14.9       |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |
| 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       | <14.9 14.9       |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |
| Total GRO-DRO                      |                   | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       | <15.0 15.0       | <15.0 15.0       | <14.9 14.9       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout  
Midland Laboratory Director



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH13**  
Lab Sample Id: 621718-001

Matrix: Soil  
Date Collected: 04.15.19 13.30

Date Received: 04.19.19 12.30  
Sample Depth: 6.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 42.0   | 5.01 | mg/kg | 04.22.19 09.43 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.21.19 01.02 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.21.19 01.02 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.21.19 01.02 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.21.19 01.02 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.21.19 01.02 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 04.21.19 01.02 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 04.21.19 01.02 |      |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH13**  
Lab Sample Id: 621718-001

Matrix: Soil  
Date Collected: 04.15.19 13.30

Date Received: 04.19.19 12.30  
Sample Depth: 6.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 12.45

Basis: Wet Weight

Seq Number: 3086479

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 04.19.19 15.44       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 04.19.19 15.44       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 04.19.19 15.44       |             |     |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH13A**  
Lab Sample Id: 621718-002

Matrix: Soil  
Date Collected: 04.15.19 14.20

Date Received: 04.19.19 12.30  
Sample Depth: 10.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 118    | 4.96 | mg/kg | 04.22.19 09.51 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.21.19 01.21 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.21.19 01.21 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.21.19 01.21 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.21.19 01.21 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.21.19 01.21 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 04.21.19 01.21 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 04.21.19 01.21 |      |





# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH13A**  
Lab Sample Id: 621718-002

Matrix: Soil  
Date Collected: 04.15.19 14.20

Date Received: 04.19.19 12.30  
Sample Depth: 10.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 12.45

Basis: Wet Weight

Seq Number: 3086479

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 04.19.19 16.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 93                | %            | 70-130        | 04.19.19 16.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 04.19.19 16.03       |             |     |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH12** Matrix: Soil Date Received: 04.19.19 12.30  
 Lab Sample Id: 621718-003 Date Collected: 04.15.19 10.50 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 04.19.19 17.00 Basis: Wet Weight  
 Seq Number: 3086463

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 235    | 4.96 | mg/kg | 04.22.19 10.34 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P  
 Tech: ARM % Moisture:  
 Analyst: ARM Date Prep: 04.20.19 11.00 Basis: Wet Weight  
 Seq Number: 3086489

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 04.21.19 01.41 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 04.21.19 01.41 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 04.21.19 01.41 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 04.21.19 01.41 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <14.9  | 14.9 | mg/kg | 04.21.19 01.41 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 04.21.19 01.41 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 04.21.19 01.41 |      |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH12**  
Lab Sample Id: 621718-003

Matrix: Soil  
Date Collected: 04.15.19 10.50

Date Received: 04.19.19 12.30  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 12.45

Basis: Wet Weight

Seq Number: 3086479

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.19.19 16.22       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 04.19.19 16.22       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 04.19.19 16.22       |             |     |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH12A**  
Lab Sample Id: 621718-004

Matrix: Soil  
Date Collected: 04.15.19 11.15

Date Received: 04.19.19 12.30  
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 868    | 4.99 | mg/kg | 04.22.19 10.41 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.21.19 02.39 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.21.19 02.39 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.21.19 02.39 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.21.19 02.39 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.21.19 02.39 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 04.21.19 02.39 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 04.21.19 02.39 |      |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH12A**  
Lab Sample Id: 621718-004

Matrix: Soil  
Date Collected: 04.15.19 11.15

Date Received: 04.19.19 12.30  
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 12.45

Basis: Wet Weight

Seq Number: 3086479

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.41       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 04.19.19 16.41       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 04.19.19 16.41       |             |     |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH11**  
Lab Sample Id: 621718-005

Matrix: Soil  
Date Collected: 04.15.19 09.15

Date Received: 04.19.19 12.30  
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 471    | 4.97 | mg/kg | 04.22.19 10.48 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.21.19 02.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.21.19 02.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.21.19 02.58 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.21.19 02.58 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.21.19 02.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 04.21.19 02.58 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 04.21.19 02.58 |      |





# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH11**  
Lab Sample Id: 621718-005

Matrix: Soil  
Date Collected: 04.15.19 09.15

Date Received: 04.19.19 12.30  
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086479

Prep Method: SW5030B

% Moisture:

Date Prep: 04.19.19 12.45

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 17.00       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 04.19.19 17.00       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 04.19.19 17.00       |             |     |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH11A**  
Lab Sample Id: 621718-006

Matrix: Soil  
Date Collected: 04.15.19 10.20

Date Received: 04.19.19 12.30  
Sample Depth: 11 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 203    | 5.04 | mg/kg | 04.22.19 10.56 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <14.9  | 14.9 | mg/kg | 04.21.19 03.18 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <14.9  | 14.9 | mg/kg | 04.21.19 03.18 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <14.9  | 14.9 | mg/kg | 04.21.19 03.18 | U    | 1   |
| Total TPH                          | PHC635     | <14.9  | 14.9 | mg/kg | 04.21.19 03.18 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <14.9  | 14.9 | mg/kg | 04.21.19 03.18 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 04.21.19 03.18 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 04.21.19 03.18 |      |



# Certificate of Analytical Results 621718



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH11A**  
Lab Sample Id: 621718-006

Matrix: Soil  
Date Collected: 04.15.19 10.20

Date Received: 04.19.19 12.30  
Sample Depth: 11 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086479

Date Prep: 04.19.19 12.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.19.19 17.19       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 04.19.19 17.19       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 04.19.19 17.19       |             |     |



## 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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

MB Sample Id: 7676199-1-BLK

Matrix: Solid

LCS Sample Id: 7676199-1-BKS

Prep Method: E300P

Date Prep: 04.19.19

LCSD Sample Id: 7676199-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00     | 250          | 260        | 104      | 269         | 108       | 90-110 | 3    | 20        | mg/kg | 04.22.19 08:54 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

Parent Sample Id: 621703-004

Matrix: Soil

MS Sample Id: 621703-004 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621703-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 111           | 248          | 394       | 114     | 399        | 116      | 90-110 | 1    | 20        | mg/kg | 04.22.19 09:15 | X    |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

Parent Sample Id: 621719-002

Matrix: Soil

MS Sample Id: 621719-002 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621719-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 12.5          | 249          | 297       | 114     | 292        | 112      | 90-110 | 2    | 20        | mg/kg | 04.22.19 11:18 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086489

MB Sample Id: 7676241-1-BLK

Matrix: Solid

LCS Sample Id: 7676241-1-BKS

Prep Method: TX1005P

Date Prep: 04.20.19

LCSD Sample Id: 7676241-1-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         | 940        | 94       | 939         | 94        | 70-135 | 0    | 20        | mg/kg | 04.20.19 21:27 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 964        | 96       | 959         | 96        | 70-135 | 1    | 20        | mg/kg | 04.20.19 21:27 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 96      |         | 118      |          | 121       |           | 70-135 | %     | 04.20.19 21:27 |
| o-Terphenyl    | 96      |         | 113      |          | 118       |           | 70-135 | %     | 04.20.19 21:27 |

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

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

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

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086489

Parent Sample Id: 621570-021

Matrix: Soil

MS Sample Id: 621570-021 S

Prep Method: TX1005P

Date Prep: 04.20.19

MSD Sample Id: 621570-021 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) | 8.50          | 998          | 903       | 90      | 904        | 90       | 70-135 | 0    | 20        | mg/kg | 04.20.19 22:26 |      |
| Diesel Range Organics (DRO)       | <8.11         | 998          | 903       | 90      | 910        | 91       | 70-135 | 1    | 20        | mg/kg | 04.20.19 22:26 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 115     |         | 114      |          | 70-135 | %     | 04.20.19 22:26 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 04.20.19 22:26 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086479

MB Sample Id: 7676251-1-BLK

Matrix: Solid

LCS Sample Id: 7676251-1-BKS

Prep Method: SW5030B

Date Prep: 04.19.19

LCSD Sample Id: 7676251-1-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        | 0.0999     | 100      | 0.0833      | 84        | 70-130 | 18   | 35        | mg/kg | 04.19.19 13:52 |      |
| Toluene      | <0.000456 | 0.100        | 0.101      | 101      | 0.0845      | 85        | 70-130 | 18   | 35        | mg/kg | 04.19.19 13:52 |      |
| Ethylbenzene | <0.000565 | 0.100        | 0.0942     | 94       | 0.0782      | 79        | 70-130 | 19   | 35        | mg/kg | 04.19.19 13:52 |      |
| m,p-Xylenes  | <0.00101  | 0.200        | 0.186      | 93       | 0.154       | 77        | 70-130 | 19   | 35        | mg/kg | 04.19.19 13:52 |      |
| o-Xylene     | <0.000344 | 0.100        | 0.0950     | 95       | 0.0792      | 80        | 70-130 | 18   | 35        | mg/kg | 04.19.19 13:52 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 92      |         | 101      |          | 100       |           | 70-130 | %     | 04.19.19 13:52 |
| 4-Bromofluorobenzene | 86      |         | 96       |          | 94        |           | 70-130 | %     | 04.19.19 13:52 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086479

Parent Sample Id: 621718-001

Matrix: Soil

MS Sample Id: 621718-001 S

Prep Method: SW5030B

Date Prep: 04.19.19

MSD Sample Id: 621718-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000384     | 0.0998       | 0.0714    | 72      | 0.0848     | 85       | 70-130 | 17   | 35        | mg/kg | 04.19.19 14:30 |      |
| Toluene      | <0.000455     | 0.0998       | 0.0714    | 72      | 0.0854     | 85       | 70-130 | 18   | 35        | mg/kg | 04.19.19 14:30 |      |
| Ethylbenzene | <0.000564     | 0.0998       | 0.0649    | 65      | 0.0785     | 79       | 70-130 | 19   | 35        | mg/kg | 04.19.19 14:30 | X    |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.128     | 64      | 0.154      | 77       | 70-130 | 18   | 35        | mg/kg | 04.19.19 14:30 | X    |
| o-Xylene     | <0.000344     | 0.0998       | 0.0655    | 66      | 0.0791     | 79       | 70-130 | 19   | 35        | mg/kg | 04.19.19 14:30 | X    |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 99      |         | 101      |          | 70-130 | %     | 04.19.19 14:30 |
| 4-Bromofluorobenzene | 95      |         | 97       |          | 70-130 | %     | 04.19.19 14:30 |

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

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

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

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





## Chain of Custody

Work Order No: 102116

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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Page 1 of 1

|                  |                                        |                         |                     |
|------------------|----------------------------------------|-------------------------|---------------------|
| Project Manager: | Adrian Baker                           | Bill to: (if different) | Kyle Little         |
| 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:                  | abaker@ltenv.com    |

|                                                                                                                                                                                                |                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Program: <input type="checkbox"/> UST/ST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund<br>State of Project: |                                                                                                           |
| Reporting Level: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV                                                               | Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: |

## ANALYSIS REQUEST

## Work Order Notes

|                 |                    |                                  |  |
|-----------------|--------------------|----------------------------------|--|
| Project Name:   | PLU CUX JV BS ODSH | Turn Around                      |  |
| Project Number: |                    | Routine <input type="checkbox"/> |  |
| P.O. Number:    | 288-2526           | Rush <input type="checkbox"/>    |  |
| Sampler's Name: | Anna Byers         | Due Date:                        |  |

|                       |             |                         |                    |          |     |    |
|-----------------------|-------------|-------------------------|--------------------|----------|-----|----|
| SAMPLE RECEIPT        | Temp Blank: | Yes                     | No                 | Wet Ice: | Yes | No |
| Temperature (°C):     | 4           | Thermometer ID: T141007 |                    |          |     |    |
| Received intact:      | Yes         | No                      |                    |          |     |    |
| Cooler Custody Seals: | Yes         | No                      | Correction Factor: | -0.2     |     |    |
| Sample Custody Seals: | Yes         | No                      | Total Containers:  | 6.       |     |    |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers |                   |                      |  |  |  |  |  |  |  |  |
|-----------------------|--------|--------------|--------------|-------|----------------------|-------------------|----------------------|--|--|--|--|--|--|--|--|
|                       |        |              |              |       | TPH (EPA 8015)       | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |  |  |
| PH13                  | S      | 4/15/19      | 1330         | 6.5'  | 1                    |                   |                      |  |  |  |  |  |  |  |  |
| PH13A                 | S      |              | 1420         | 10.5' | 1                    |                   |                      |  |  |  |  |  |  |  |  |
| PH12                  | S      |              | 1050         | 0.5'  | 1                    |                   |                      |  |  |  |  |  |  |  |  |
| PH12A                 | S      |              | 1115         | 4.5'  | 1                    |                   |                      |  |  |  |  |  |  |  |  |
| PH11                  | S      |              | 0915         | 4.5'  | 1                    |                   |                      |  |  |  |  |  |  |  |  |
| PH11A                 | S      |              | 1020         | 11'   | 1                    |                   |                      |  |  |  |  |  |  |  |  |

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

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 Ti Sn U V Zn  
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |                 |                              |                          |                  |
|------------------------------|--------------------------|-----------------|------------------------------|--------------------------|------------------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time       | Relinquished by: (Signature) | Received by: (Signature) | Date/Time        |
| Anna Byers                   |                          | 04/17/2019 2:00 |                              |                          | 04/17/2019 16:30 |
|                              |                          |                 |                              |                          |                  |
|                              |                          |                 |                              |                          |                  |
|                              |                          |                 |                              |                          |                  |



Client: LT Environmental, Inc.

Date/ Time Received: 04/19/2019 12:30:00 PM

Work Order #: 621718

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 04/19/2019

Checklist reviewed by:

Kalei Stout

Date: 04/19/2019

# Analytical Report 621719

for  
**LT Environmental, Inc.**

**Project Manager: Adrian Baker**

**PLU CVX JV BS 005H**

---

**23-APR-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



23-APR-19

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

Reference: XENCO Report No(s): **621719**  
**PLU CVX JV BS 005H**  
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) 621719. 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. 621719 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

**Kalei Stout**

Midland Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 621719

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| PH14      | S      | 04-15-19 15:10 | 0.5 ft       | 621719-001    |
| PH14A     | S      | 04-15-19 15:25 | 1.0 ft       | 621719-002    |
| PH15      | S      | 04-15-19 16:00 | 0.5 ft       | 621719-003    |
| PH15A     | S      | 04-15-19 16:05 | 1.0 ft       | 621719-004    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU CVX JV BS 005H**

Project ID: ---  
Work Order Number(s): 621719

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

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3086463 Chloride by EPA 300

Lab Sample ID 621719-002 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: 621719-001, -002, -003, -004.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3086496 BTEX by EPA 8021B

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





# Certificate of Analysis Summary 621719

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 005H

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

Date Received in Lab: Fri Apr-19-19 12:00 pm  
Report Date: 23-APR-19  
Project Manager: Kalei Stout

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 621719-001       | 621719-002       | 621719-003       | 621719-004       |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|--|--|
|                                    | <i>Field Id:</i>  | PH14             | PH14A            | PH15             | PH15A            |  |  |
|                                    | <i>Depth:</i>     | 0.5- ft          | 1.0- ft          | 0.5- ft          | 1.0- ft          |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             |  |  |
|                                    | <i>Sampled:</i>   | Apr-15-19 15:10  | Apr-15-19 15:25  | Apr-15-19 16:00  | Apr-15-19 16:05  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  | Apr-19-19 13:15  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-19-19 15:59  | Apr-19-19 16:18  | Apr-19-19 16:37  | Apr-19-19 16:56  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Benzene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Toluene                            |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00399 0.00399 | <0.00400 0.00400 | <0.00403 0.00403 |  |  |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Total Xylenes                      |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  | Apr-19-19 17:00  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-22-19 11:03  | Apr-22-19 11:10  | Apr-22-19 11:32  | Apr-22-19 11:40  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Chloride                           |                   | 83.3 4.98        | 12.5 4.98        | 48.0 5.00        | 51.7 5.01        |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Apr-20-19 11:00  | Apr-19-19 17:00  | Apr-19-19 16:00  | Apr-19-19 16:00  |  |  |
|                                    | <i>Analyzed:</i>  | Apr-21-19 03:37  | Apr-20-19 05:22  | Apr-19-19 19:47  | Apr-19-19 20:06  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Diesel Range Organics (DRO)        |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Total TPH                          |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |
| Total GRO-DRO                      |                   | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       | <15.0 15.0       |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout  
Midland Laboratory Director



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH14**  
Lab Sample Id: 621719-001

Matrix: Soil  
Date Collected: 04.15.19 15.10

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 83.3   | 4.98 | mg/kg | 04.22.19 11.03 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086489

Date Prep: 04.20.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.21.19 03.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.21.19 03.37 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.21.19 03.37 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.21.19 03.37 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.21.19 03.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 04.21.19 03.37 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 04.21.19 03.37 |      |



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH14**  
Lab Sample Id: 621719-001

Matrix: Soil  
Date Collected: 04.15.19 15.10

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 04.19.19 15.59       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 125               | %            | 70-130        | 04.19.19 15.59       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 04.19.19 15.59       |             |     |



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH14A**  
Lab Sample Id: 621719-002

Matrix: Soil  
Date Collected: 04.15.19 15.25

Date Received: 04.19.19 12.00  
Sample Depth: 1.0 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 12.5   | 4.98 | mg/kg | 04.22.19 11.10 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086485

Date Prep: 04.19.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.20.19 05.22 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.20.19 05.22 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.20.19 05.22 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.20.19 05.22 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.20.19 05.22 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 89         | %     | 70-135 | 04.20.19 05.22 |      |
| o-Terphenyl    | 84-15-1    | 86         | %     | 70-135 | 04.20.19 05.22 |      |



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH14A**  
Lab Sample Id: 621719-002

Matrix: Soil  
Date Collected: 04.15.19 15.25

Date Received: 04.19.19 12.00  
Sample Depth: 1.0 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086496

Prep Method: SW5030B

% Moisture:

Date Prep: 04.19.19 13.15

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.18       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 121               | %            | 70-130        | 04.19.19 16.18       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 04.19.19 16.18       |             |     |



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH15**  
Lab Sample Id: 621719-003

Matrix: Soil  
Date Collected: 04.15.19 16.00

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 48.0   | 5.00 | mg/kg | 04.22.19 11.32 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086484

Date Prep: 04.19.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.19.19 19.47 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.19.19 19.47 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.19.19 19.47 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.19.19 19.47 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.19.19 19.47 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 04.19.19 19.47 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 04.19.19 19.47 |      |





# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH15**  
Lab Sample Id: 621719-003

Matrix: Soil  
Date Collected: 04.15.19 16.00

Date Received: 04.19.19 12.00  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 04.19.19 16.37       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 129               | %            | 70-130        | 04.19.19 16.37       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 04.19.19 16.37       |             |     |



# Certificate of Analytical Results 621719



## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH15A**  
Lab Sample Id: 621719-004

Matrix: Soil  
Date Collected: 04.15.19 16.05

Date Received: 04.19.19 12.00  
Sample Depth: 1.0 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086463

Date Prep: 04.19.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 51.7   | 5.01 | mg/kg | 04.22.19 11.40 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3086484

Date Prep: 04.19.19 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <15.0  | 15.0 | mg/kg | 04.19.19 20.06 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <15.0  | 15.0 | mg/kg | 04.19.19 20.06 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <15.0  | 15.0 | mg/kg | 04.19.19 20.06 | U    | 1   |
| Total TPH                          | PHC635     | <15.0  | 15.0 | mg/kg | 04.19.19 20.06 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <15.0  | 15.0 | mg/kg | 04.19.19 20.06 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 04.19.19 20.06 |      |
| o-Terphenyl    | 84-15-1    | 90         | %     | 70-135 | 04.19.19 20.06 |      |



## Certificate of Analytical Results 621719

## LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 005H

Sample Id: **PH15A**  
 Lab Sample Id: 621719-004

Matrix: Soil  
 Date Collected: 04.15.19 16.05

Date Received: 04.19.19 12.00  
 Sample Depth: 1.0 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.19.19 13.15

Basis: Wet Weight

Seq Number: 3086496

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 04.19.19 16.56       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 121               | %            | 70-130        | 04.19.19 16.56       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 04.19.19 16.56       |             |     |



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

MB Sample Id: 7676199-1-BLK

Matrix: Solid

LCS Sample Id: 7676199-1-BKS

Prep Method: E300P

Date Prep: 04.19.19

LCSD Sample Id: 7676199-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00     | 250          | 260        | 104      | 269         | 108       | 90-110 | 3    | 20        | mg/kg | 04.22.19 08:54 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

Parent Sample Id: 621703-004

Matrix: Soil

MS Sample Id: 621703-004 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621703-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 111           | 248          | 394       | 114     | 399        | 116      | 90-110 | 1    | 20        | mg/kg | 04.22.19 09:15 | X    |

## Analytical Method: Chloride by EPA 300

Seq Number: 3086463

Parent Sample Id: 621719-002

Matrix: Soil

MS Sample Id: 621719-002 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621719-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 12.5          | 249          | 297       | 114     | 292        | 112      | 90-110 | 2    | 20        | mg/kg | 04.22.19 11:18 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086484

MB Sample Id: 7676238-1-BLK

Matrix: Solid

LCS Sample Id: 7676238-1-BKS

Prep Method: TX1005P

Date Prep: 04.19.19

LCSD Sample Id: 7676238-1-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      | 1050        | 105       | 70-135 | 4    | 20        | mg/kg | 04.19.19 11:40 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 1070       | 107      | 1090        | 109       | 70-135 | 2    | 20        | mg/kg | 04.19.19 11:40 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 99      |         | 127      |          | 129       |           | 70-135 | %     | 04.19.19 11:40 |
| o-Terphenyl    | 101     |         | 122      |          | 127       |           | 70-135 | %     | 04.19.19 11:40 |

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086485

MB Sample Id: 7676239-1-BLK

Matrix: Solid

LCS Sample Id: 7676239-1-BKS

Prep Method: TX1005P

Date Prep: 04.19.19

LCSD Sample Id: 7676239-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD  | RPD Limit      | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|-------|----------------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <8.00     | 1000         | 1050       | 105      | 1010        | 101       | 70-135 | 4     | 20             | mg/kg | 04.19.19 21:05 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 1120       | 112      | 1070        | 107       | 70-135 | 5     | 20             | mg/kg | 04.19.19 21:05 |      |
| Surrogate                         | MB %Rec   | MB Flag      | LCS %Rec   | LCS Flag | LCSD %Rec   | LCSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    | 101       |              | 123        |          | 122         |           | 70-135 | %     | 04.19.19 21:05 |       |                |      |
| o-Terphenyl                       | 103       |              | 118        |          | 126         |           | 70-135 | %     | 04.19.19 21:05 |       |                |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086489

MB Sample Id: 7676241-1-BLK

Matrix: Solid

LCS Sample Id: 7676241-1-BKS

Prep Method: TX1005P

Date Prep: 04.20.19

LCSD Sample Id: 7676241-1-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         | 940        | 94       | 939         | 94        | 70-135 | 0     | 20             | mg/kg | 04.20.19 21:27 |      |
| Diesel Range Organics (DRO)       | <8.13     | 1000         | 964        | 96       | 959         | 96        | 70-135 | 1     | 20             | mg/kg | 04.20.19 21:27 |      |
| Surrogate                         | MB %Rec   | MB Flag      | LCS %Rec   | LCS Flag | LCSD %Rec   | LCSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    | 96        |              | 118        |          | 121         |           | 70-135 | %     | 04.20.19 21:27 |       |                |      |
| o-Terphenyl                       | 96        |              | 113        |          | 118         |           | 70-135 | %     | 04.20.19 21:27 |       |                |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086484

Parent Sample Id: 621515-001

Matrix: Soil

MS Sample Id: 621515-001 S

Prep Method: TX1005P

Date Prep: 04.19.19

MSD Sample Id: 621515-001 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          | 883       | 88      | 888        | 89       | 70-135 | 1     | 20             | mg/kg | 04.19.19 12:39 |      |
| Diesel Range Organics (DRO)       | <8.12         | 999          | 905       | 91      | 917        | 92       | 70-135 | 1     | 20             | mg/kg | 04.19.19 12:39 |      |
| Surrogate                         |               |              | MS %Rec   | MS Flag | MSD %Rec   | MSD Flag | Limits | Units | Analysis Date  |       |                |      |
| 1-Chlorooctane                    |               |              | 119       |         | 119        |          | 70-135 | %     | 04.19.19 12:39 |       |                |      |
| o-Terphenyl                       |               |              | 111       |         | 113        |          | 70-135 | %     | 04.19.19 12:39 |       |                |      |

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

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

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





## LT Environmental, Inc.

PLU CVX JV BS 005H

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086485

Parent Sample Id: 621574-001

Matrix: Soil

MS Sample Id: 621574-001 S

Prep Method: TX1005P

Date Prep: 04.19.19

MSD Sample Id: 621574-001 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) | 8.24          | 999          | 864       | 86      | 864        | 86       | 70-135 | 0    | 20        | mg/kg | 04.19.19 22:04 |      |
| Diesel Range Organics (DRO)       | <8.12         | 999          | 905       | 91      | 897        | 90       | 70-135 | 1    | 20        | mg/kg | 04.19.19 22:04 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 111     |         | 111      |          | 70-135 | %     | 04.19.19 22:04 |
| o-Terphenyl    | 102     |         | 105      |          | 70-135 | %     | 04.19.19 22:04 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3086489

Parent Sample Id: 621570-021

Matrix: Soil

MS Sample Id: 621570-021 S

Prep Method: TX1005P

Date Prep: 04.20.19

MSD Sample Id: 621570-021 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) | 8.50          | 998          | 903       | 90      | 904        | 90       | 70-135 | 0    | 20        | mg/kg | 04.20.19 22:26 |      |
| Diesel Range Organics (DRO)       | <8.11         | 998          | 903       | 90      | 910        | 91       | 70-135 | 1    | 20        | mg/kg | 04.20.19 22:26 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 115     |         | 114      |          | 70-135 | %     | 04.20.19 22:26 |
| o-Terphenyl    | 111     |         | 107      |          | 70-135 | %     | 04.20.19 22:26 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3086496

MB Sample Id: 7676257-1-BLK

Matrix: Solid

LCS Sample Id: 7676257-1-BKS

Prep Method: SW5030B

Date Prep: 04.19.19

LCSD Sample Id: 7676257-1-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       | 0.0914     | 92       | 0.0932      | 93        | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| Toluene      | <0.00199  | 0.0996       | 0.0968     | 97       | 0.0983      | 98        | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| Ethylbenzene | <0.00199  | 0.0996       | 0.103      | 103      | 0.105       | 105       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |
| m,p-Xylenes  | <0.00101  | 0.199        | 0.209      | 105      | 0.212       | 106       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:07 |      |
| o-Xylene     | <0.00199  | 0.0996       | 0.106      | 106      | 0.108       | 108       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:07 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 104     |         | 95       |          | 95        |           | 70-130 | %     | 04.19.19 14:07 |
| 4-Bromofluorobenzene | 111     |         | 108      |          | 108       |           | 70-130 | %     | 04.19.19 14:07 |

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

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

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



## LT Environmental, Inc.

PLU CVX JV BS 005H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3086496

Parent Sample Id: 621719-001

Matrix: Soil

MS Sample Id: 621719-001 S

Prep Method: SW5030B

Date Prep: 04.19.19

MSD Sample Id: 621719-001 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       | 0.0813    | 82      | 0.0829     | 83       | 70-130 | 2    | 35        | mg/kg | 04.19.19 14:45 |      |
| Toluene      | 0.000543      | 0.0994       | 0.0865    | 86      | 0.0874     | 87       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:45 |      |
| Ethylbenzene | <0.000561     | 0.0994       | 0.0917    | 92      | 0.0925     | 93       | 70-130 | 1    | 35        | mg/kg | 04.19.19 14:45 |      |
| m,p-Xylenes  | <0.00101      | 0.199        | 0.187     | 94      | 0.187      | 94       | 70-130 | 0    | 35        | mg/kg | 04.19.19 14:45 |      |
| o-Xylene     | 0.000413      | 0.0994       | 0.0950    | 95      | 0.0954     | 95       | 70-130 | 0    | 35        | mg/kg | 04.19.19 14:45 |      |

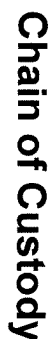
| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 96       |          | 70-130 | %     | 04.19.19 14:45 |
| 4-Bromofluorobenzene | 113     |         | 112      |          | 70-130 | %     | 04.19.19 14:45 |

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

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

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

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



**Work Order No**

187169

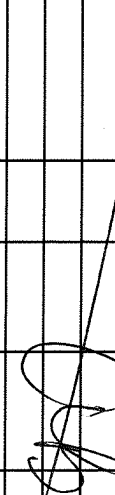
Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Phoenix, AZ (602) 392-7550 Atlanta, GA (770-449-8800) Tampa, FL (813) 233-3333  
Hobbs, NM (575-392-7550)

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Page 1 of 1

| Work Order Comments |                                                                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: UST/PST    | <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>   |
| State of Project:   |                                                                                                                                                             |
| Reporting: Level II | <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> PRP <input type="checkbox"/> Level IV <input type="checkbox"/> |
| Deliverables: EDD   | <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                              |

|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|------------------------------|----------------------|-------------------------------|--------------------------|---------------------------|-----------|-----------------|--------------|-----------|--|---------------------------------------------------------------|--|--|--|--|
| <b>Project Name:</b>         | PLO CUX JV BS #005 H | <b>Turn Around</b>            | <b>ANALYSIS REQUEST</b>  |                           |           |                 |              |           |  | <b>Work Order Notes</b>                                       |  |  |  |  |
| <b>Project Number:</b>       |                      | <b>Routine</b>                | <input type="checkbox"/> |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>P.O. Number:</b>          | 2RR-4775 + 2RR-4779  | <b>Rush:</b>                  | same day                 |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>Sampler's Name:</b>       | Anna Byers           |                               | <b>Due Date:</b>         |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>SAMPLE RECEIPT</b>        |                      |                               | <b>Temp Blank:</b>       | <b>Yes</b>                | <b>No</b> | <b>Wet Ice:</b> | <b>(Yes)</b> | <b>No</b> |  |                                                               |  |  |  |  |
| <b>Temperature (°C):</b>     | 4                    | <b>Thermometer ID</b> T NM100 |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>Received Intact:</b>      | <b>Yes</b>           | <b>No</b>                     |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>Cooler Custody Seals:</b> | <b>Yes</b>           | <b>No</b>                     | N/A                      | <b>Correction Factor:</b> |           |                 |              |           |  |                                                               |  |  |  |  |
| <b>Sample Custody Seals:</b> | <b>Yes</b>           | <b>No</b>                     | N/A                      | <b>Total Containers:</b>  | 4         |                 |              |           |  |                                                               |  |  |  |  |
| <b>Number of Containers</b>  |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| (EPA 8015)                   |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| (EPA 0=8021)                 |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
| (EPA 300.0)                  |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  |                                                               |  |  |  |  |
|                              |                      |                               |                          |                           |           |                 |              |           |  | TAT starts the day received by the lab, if received by 4:30pm |  |  |  |  |

| Sample Identification                                                             | Matrix | Date Sampled | Time Sampled | Depth | Number | TPH (EP) | BTEX (E) | Chloride | Sample Comments |
|-----------------------------------------------------------------------------------|--------|--------------|--------------|-------|--------|----------|----------|----------|-----------------|
| PH14                                                                              | S      | 4/15/19      | 1510         | 0.5'  | 1      |          |          |          |                 |
| PH14A                                                                             | S      |              | 1525         | 1.0'  | 1      |          |          |          |                 |
| PH13                                                                              | S      |              | 1600         | 0.5'  | 1      |          |          |          |                 |
| PH15A                                                                             | S      | ↑            | 1605         | 1.0'  | 1      |          |          |          |                 |
|  |        |              |              |       |        |          |          |          |                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|-------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|------|----|----|----|----|---|---|----|
| <b>Total 200.7 / 6010:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>200.8 / 6020:</b> | 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 | Ti | Sn | U | V | Zn |
| <i>Circle Method(s) and Metal(s) to be analyzed</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      | TCLP / SPLP | 6010: | 8RCRA    | Sb | As | Ba | Be | Cd | Cr | Co | Cu | Pb | Mn | Mo | Ni | Se | Ag | Ti | U  |    |   |    |    |      |    |    |    |    |   |   |    |
| Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated. |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |
| 1631 / 245.1 / 7470 / 7471 : Hg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time       | Relinquished by: (Signature) | Received by: (Signature) | Date/Time        |
|------------------------------|--------------------------|-----------------|------------------------------|--------------------------|------------------|
| 1 <i>Annun Byers</i>         | <i>[Signature]</i>       | 04/17/2019 7:22 | 2 <i>[Signature]</i>         | <i>[Signature]</i>       | 04/17/2019 16:30 |
| 3                            |                          |                 | 4                            |                          |                  |
| 5                            |                          |                 | 6                            |                          |                  |



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/19/2019 12:00:00 PM

Work Order #: 621719

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

**Sample Receipt Checklist****Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 04/19/2019

Checklist reviewed by:

Kalei Stout

Date: 04/19/2019

# Analytical Report 640666

for  
LT Environmental, Inc.

Project Manager: Dan Moir  
PLU Big Sinks 25 Federal Battery  
2RP-2526  
18-NOV-19

Collected By: Client



1089 N Canal Street  
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



18-NOV-19

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **640666**

**PLU Big Sinks 25 Federal Battery**

Project Address:

**Dan Moir:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640666. 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. 640666 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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





## Sample Cross Reference 640666

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| FS09A     | S      | 10-21-19 10:20 | 7 ft         | 640666-001    |
| SW12      | S      | 10-21-19 10:50 | 1 - 3 ft     | 640666-002    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU Big Sinks 25 Federal Battery**

Project ID: 2RP-2526  
Work Order Number(s): 640666

Report Date: 18-NOV-19  
Date Received: 10/22/2019

---

**Sample receipt non conformances and comments:**

Per clients email, corrected sample 002 name from SW11 to SW12. NEW VERSION GENERATED JK 11/18/19

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3105173 Chloride by EPA 300

Lab Sample ID 640666-001 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: 640666-001, -002.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3105180 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 640666

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 2RP-2526

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Oct-22-19 10:50 am

Report Date: 18-NOV-19

Project Manager: Jessica Kramer

|                                    |                   |                    |                  |  |  |  |  |
|------------------------------------|-------------------|--------------------|------------------|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 640666-001         | 640666-002       |  |  |  |  |
|                                    | <b>Field Id:</b>  | FS09A              | SW12             |  |  |  |  |
|                                    | <b>Depth:</b>     | 7- ft              | 1-3 ft           |  |  |  |  |
|                                    | <b>Matrix:</b>    | SOIL               | SOIL             |  |  |  |  |
|                                    | <b>Sampled:</b>   | Oct-21-19 10:20    | Oct-21-19 10:50  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Oct-22-19 15:10    | Oct-22-19 15:10  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Oct-23-19 02:36    | Oct-23-19 02:56  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL           | mg/kg RL         |  |  |  |  |
| Benzene                            |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| Toluene                            |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| Ethylbenzene                       |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| m,p-Xylenes                        |                   | <0.00198 0.00198   | <0.00200 0.00200 |  |  |  |  |
| o-Xylene                           |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| Total Xylenes                      |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| Total BTEX                         |                   | <0.000990 0.000990 | <0.00100 0.00100 |  |  |  |  |
| <b>Chloride by EPA 300</b>         | <b>Extracted:</b> | Oct-22-19 16:10    | Oct-22-19 16:10  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Oct-22-19 18:43    | Oct-22-19 19:02  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL           | mg/kg RL         |  |  |  |  |
| Chloride                           |                   | 1210 49.9          | 695 50.0         |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Oct-22-19 14:10    | Oct-22-19 14:10  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Oct-22-19 23:22    | Oct-22-19 23:22  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL           | mg/kg RL         |  |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.3 50.3         | <50.2 50.2       |  |  |  |  |
| Diesel Range Organics (DRO)        |                   | <50.3 50.3         | <50.2 50.2       |  |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.3 50.3         | <50.2 50.2       |  |  |  |  |
| Total GRO-DRO                      |                   | <50.3 50.3         | <50.2 50.2       |  |  |  |  |
| Total TPH                          |                   | <50.3 50.3         | <50.2 50.2       |  |  |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 640666

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **FS09A**  
Lab Sample Id: 640666-001

Matrix: Soil  
Date Collected: 10.21.19 10.20

Date Received: 10.22.19 10.50  
Sample Depth: 7 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3105173

Date Prep: 10.22.19 16.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1210   | 49.9 | mg/kg | 10.22.19 18.43 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3105101

Date Prep: 10.22.19 14.10

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.3  | 50.3 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.3  | 50.3 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Total TPH                          | PHC635     | <50.3  | 50.3 | mg/kg | 10.22.19 23.22 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 10.22.19 23.22 |      |
| o-Terphenyl    | 84-15-1    | 90         | %     | 70-135 | 10.22.19 23.22 |      |



# Certificate of Analytical Results 640666

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **FS09A**  
Lab Sample Id: 640666-001

Matrix: Soil  
Date Collected: 10.21.19 10.20

Date Received: 10.22.19 10.50  
Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.22.19 15.10

Basis: Wet Weight

Seq Number: 3105180

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| Toluene              | 108-88-3          | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00198          | 0.00198      | mg/kg         | 10.23.19 02.36       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| Total BTEX           |                   | <0.000990         | 0.000990     | mg/kg         | 10.23.19 02.36       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 10.23.19 02.36       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 108               | %            | 70-130        | 10.23.19 02.36       |             |     |



# Certificate of Analytical Results 640666

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SW12** Matrix: Soil Date Received: 10.22.19 10.50  
 Lab Sample Id: 640666-002 Date Collected: 10.21.19 10.50 Sample Depth: 1 - 3 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 10.22.19 16.10 Basis: Wet Weight  
 Seq Number: 3105173

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 695    | 50.0 | mg/kg | 10.22.19 19.02 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 10.22.19 14.10 Basis: Wet Weight  
 Seq Number: 3105101

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 10.22.19 23.22 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 10.22.19 23.22 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 85         | %     | 70-135 | 10.22.19 23.22 |      |
| o-Terphenyl    | 84-15-1    | 87         | %     | 70-135 | 10.22.19 23.22 |      |





# Certificate of Analytical Results 640666

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SW12**  
Lab Sample Id: 640666-002

Matrix: Soil  
Date Collected: 10.21.19 10.50

Date Received: 10.22.19 10.50  
Sample Depth: 1 - 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.22.19 15.10

Basis: Wet Weight

Seq Number: 3105180

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| Toluene              | 108-88-3          | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00200          | 0.00200      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| Total BTEX           |                   | <0.00100          | 0.00100      | mg/kg         | 10.23.19 02.56       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 113               | %            | 70-130        | 10.23.19 02.56       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 10.23.19 02.56       |             |     |



## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

**+** NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105173

MB Sample Id: 7688678-1-BLK

Matrix: Solid

LCS Sample Id: 7688678-1-BKS

Prep Method: E300P

Date Prep: 10.22.19

LCSD Sample Id: 7688678-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 270        | 108      | 269         | 108       | 90-110 | 0    | 20        | mg/kg | 10.22.19 16:43 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105173

Parent Sample Id: 640664-001

Matrix: Solid

MS Sample Id: 640664-001 S

Prep Method: E300P

Date Prep: 10.22.19

MSD Sample Id: 640664-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 24.5          | 199          | 247       | 112     | 246        | 111      | 90-110 | 0    | 20        | mg/kg | 10.22.19 17:03 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105173

Parent Sample Id: 640666-001

Matrix: Solid

MS Sample Id: 640666-001 S

Prep Method: E300P

Date Prep: 10.22.19

MSD Sample Id: 640666-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 1210          | 996          | 2490      | 129     | 2520       | 131      | 90-110 | 1    | 20        | mg/kg | 10.22.19 18:49 | X    |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105101

MB Sample Id: 7688651-1-BLK

Matrix: Solid

LCS Sample Id: 7688651-1-BKS

Prep Method: SW8015P

Date Prep: 10.22.19

LCSD Sample Id: 7688651-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0     | 1000         | 889        | 89       | 875         | 88        | 70-135 | 2    | 35        | mg/kg | 10.22.19 22:02 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 826        | 83       | 807         | 81        | 70-135 | 2    | 35        | mg/kg | 10.22.19 22:02 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 77      |         | 93       |          | 92        |           | 70-135 | %     | 10.22.19 22:02 |
| o-Terphenyl    | 78      |         | 88       |          | 87        |           | 70-135 | %     | 10.22.19 22:02 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105101

Matrix: Solid

MB Sample Id: 7688651-1-BLK

Prep Method: SW8015P

Date Prep: 10.22.19

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 10.22.19 22:02 |      |

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

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

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

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105101

Parent Sample Id: 640662-011

Matrix: Soil

MS Sample Id: 640662-011 S

Prep Method: SW8015P

Date Prep: 10.22.19

MSD Sample Id: 640662-011 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) | <50.2         | 1000         | 832       | 83      | 790        | 79       | 70-135 | 5    | 35        | mg/kg | 10.22.19 22:42 |      |
| Diesel Range Organics (DRO)       | 18.0          | 1000         | 726       | 71      | 713        | 70       | 70-135 | 2    | 35        | mg/kg | 10.22.19 22:42 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 114     |         | 99       |          | 70-135 | %     | 10.22.19 22:42 |
| o-Terphenyl    | 97      |         | 96       |          | 70-135 | %     | 10.22.19 22:42 |

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

Seq Number: 3105180

MB Sample Id: 7688753-1-BLK

Matrix: Solid

LCS Sample Id: 7688753-1-BKS

Prep Method: SW5030B

Date Prep: 10.22.19

LCSD Sample Id: 7688753-1-BSD

| Parameter    | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00100  | 0.100        | 0.0927     | 93       | 0.0921      | 92        | 70-130 | 1    | 35        | mg/kg | 10.22.19 17:03 |      |
| Toluene      | <0.00100  | 0.100        | 0.0898     | 90       | 0.0891      | 89        | 70-130 | 1    | 35        | mg/kg | 10.22.19 17:03 |      |
| Ethylbenzene | <0.00100  | 0.100        | 0.0923     | 92       | 0.0913      | 91        | 71-129 | 1    | 35        | mg/kg | 10.22.19 17:03 |      |
| m,p-Xylenes  | <0.00200  | 0.200        | 0.185      | 93       | 0.183       | 92        | 70-135 | 1    | 35        | mg/kg | 10.22.19 17:03 |      |
| o-Xylene     | <0.00100  | 0.100        | 0.0922     | 92       | 0.0922      | 92        | 71-133 | 0    | 35        | mg/kg | 10.22.19 17:03 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 100     |         | 101      |          | 102       |           | 70-130 | %     | 10.22.19 17:03 |
| 4-Bromofluorobenzene | 107     |         | 104      |          | 108       |           | 70-130 | %     | 10.22.19 17:03 |

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

Seq Number: 3105180

Parent Sample Id: 640664-001

Matrix: Soil

MS Sample Id: 640664-001 S

Prep Method: SW5030B

Date Prep: 10.22.19

MSD Sample Id: 640664-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000990     | 0.0990       | 0.0949    | 96      | 0.0951     | 95       | 70-130 | 0    | 35        | mg/kg | 10.22.19 17:44 |      |
| Toluene      | <0.000990     | 0.0990       | 0.0912    | 92      | 0.0897     | 90       | 70-130 | 2    | 35        | mg/kg | 10.22.19 17:44 |      |
| Ethylbenzene | <0.000990     | 0.0990       | 0.0931    | 94      | 0.0905     | 91       | 71-129 | 3    | 35        | mg/kg | 10.22.19 17:44 |      |
| m,p-Xylenes  | <0.00198      | 0.198        | 0.187     | 94      | 0.181      | 91       | 70-135 | 3    | 35        | mg/kg | 10.22.19 17:44 |      |
| o-Xylene     | <0.000990     | 0.0990       | 0.0939    | 95      | 0.0915     | 92       | 71-133 | 3    | 35        | mg/kg | 10.22.19 17:44 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 105     |         | 105      |          | 70-130 | %     | 10.22.19 17:44 |
| 4-Bromofluorobenzene | 110     |         | 111      |          | 70-130 | %     | 10.22.19 17:44 |

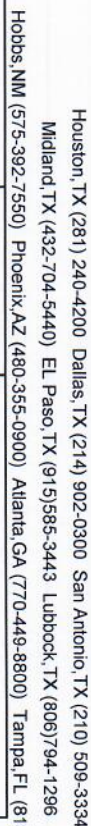
MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 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





Work Order No: 40666

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)794-129

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Page 1 of 7  
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| Work Order Comments                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| <b>Program:</b> UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>     |  |  |  |  |  |  |  |  |  |
| <b>State of Project:</b>                                                                                                                                                             |  |  |  |  |  |  |  |  |  |
| <b>Reporting Level:</b> II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/> |  |  |  |  |  |  |  |  |  |
| <b>Deliverables:</b> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="text"/>                                                                         |  |  |  |  |  |  |  |  |  |

[illegible][illegible]

| Sample Identification                                                              | Matrix | Date Sampled | Time Sampled | Depth | Number | TPH (E) | BTEX | Chloride | Sample Comments |
|------------------------------------------------------------------------------------|--------|--------------|--------------|-------|--------|---------|------|----------|-----------------|
| FS09A                                                                              | S      | 10-21-19     | 1020         | 7'    |        | X       | X    | X        |                 |
| SW11                                                                               | S      | 10-21-19     | 1050         | 1-3'  |        | X       | X    | X        |                 |
|  |        |              |              |       |        |         |      |          |                 |

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 Ti Sn U V Zn

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions to the client. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

| Relinquished by: (Signature) | Received by: (Signature) | Date/Time       | Relinquished by: (Signature) | Received by: (Signature) | Date/Time      |
|------------------------------|--------------------------|-----------------|------------------------------|--------------------------|----------------|
| <i>Sam L</i>                 | <i>Anna Byers</i>        | 10/22/19 @ 1005 | <i>Anna Byers</i>            | <i>Cooper</i>            | 10/22/19 10:50 |
|                              |                          |                 |                              |                          |                |
|                              |                          |                 |                              |                          |                |
|                              |                          |                 |                              |                          |                |
|                              |                          |                 |                              |                          |                |
|                              |                          |                 |                              |                          |                |



## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/22/2019 10:50:00 AM

Work Order #: 640666

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 10/22/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/22/2019



# Analytical Report 640781

for  
**LT Environmental, Inc.**

**Project Manager: Dan Moir**  
**PLU Big Sinks 25 Federal Battery**  
**2RP-4398**  
**28-OCT-19**

Collected By: Client



**1089 N Canal Street**  
**Carlsbad, NM 88220**

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

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



28-OCT-19

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **640781**

**PLU Big Sinks 25 Federal Battery**

Project Address:

**Dan Moir:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640781. 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. 640781 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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



## Sample Cross Reference 640781

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| PH01      | S      | 10-22-19 13:35 | 1 ft         | 640781-001    |
| PH01A     | S      | 10-22-19 13:40 | 2 ft         | 640781-002    |
| PH01B     | S      | 10-22-19 13:45 | 3 ft         | 640781-003    |
| PH01C     | S      | 10-22-19 13:50 | 4 ft         | 640781-004    |
| PH01D     | S      | 10-22-19 13:55 | 5 ft         | 640781-005    |
| PH02      | S      | 10-22-19 14:10 | 1 ft         | 640781-006    |
| PH02A     | S      | 10-22-19 14:15 | 2 ft         | 640781-007    |
| PH02B     | S      | 10-22-19 14:20 | 3 ft         | 640781-008    |
| PH02C     | S      | 10-22-19 14:25 | 4 ft         | 640781-009    |
| PH02D     | S      | 10-22-19 14:30 | 5 ft         | 640781-010    |
| BH01      | S      | 10-22-19 16:20 | 1 ft         | 640781-011    |
| BH01A     | S      | 10-22-19 16:25 | 2 ft         | 640781-012    |
| BH01B     | S      | 10-22-19 16:30 | 3 ft         | 640781-013    |
| BH01C     | S      | 10-22-19 16:35 | 4 ft         | 640781-014    |
| BH01D     | S      | 10-22-19 16:40 | 5 ft         | 640781-015    |
| FS01      | S      | 10-22-19 12:40 | 5 ft         | 640781-016    |
| FS02      | S      | 10-22-19 12:45 | 5 ft         | 640781-017    |
| SW03      | S      | 10-22-19 12:50 | 1 - 5 ft     | 640781-018    |
| SW01      | S      | 10-22-19 12:55 | 1 - 5 ft     | 640781-019    |
| SW02      | S      | 10-22-19 13:00 | 1 - 5 ft     | 640781-020    |
| SW04      | S      | 10-22-19 13:05 | 1 - 5 ft     | 640781-021    |



## CASE NARRATIVE

**Client Name: LT Environmental, Inc.**

**Project Name: PLU Big Sinks 25 Federal Battery**

Project ID: 2RP-4398  
Work Order Number(s): 640781

Report Date: 28-OCT-19  
Date Received: 10/23/2019

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3105377 Chloride by EPA 300

Lab Sample ID 640781-020 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: 640781-009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3105530 BTEX by EPA 8021B

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

Batch: LBA-3105532 BTEX by EPA 8021B

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

## Certificate of Analysis Summary 640781



LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 2RP-4398

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19

Project Manager: Jessica Kramer

| <b>Analysis Requested</b>                            | <b>Lab Id:</b>    | 640781-001       | 640781-002       | 640781-003       | 640781-004       | 640781-005       | 640781-006       |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                                      | <b>Field Id:</b>  | PH01             | PH01A            | PH01B            | PH01C            | PH01D            | PH02             |
|                                                      | <b>Depth:</b>     | 1- ft            | 2- ft            | 3- ft            | 4- ft            | 5- ft            | 1- ft            |
|                                                      | <b>Matrix:</b>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                                      | <b>Sampled:</b>   | Oct-22-19 13:35  | Oct-22-19 13:40  | Oct-22-19 13:45  | Oct-22-19 13:50  | Oct-22-19 13:55  | Oct-22-19 14:10  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <b>Extracted:</b> | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  |
|                                                      | <b>Analyzed:</b>  | Oct-27-19 14:02  | Oct-27-19 14:23  | Oct-27-19 14:43  | Oct-27-19 15:03  | Oct-27-19 15:23  | Oct-27-19 15:43  |
|                                                      | <b>Units/RL:</b>  | 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 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| Toluene                                              |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| Ethylbenzene                                         |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| m,p-Xylenes                                          |                   | <0.00402 0.00402 | <0.00398 0.00398 | <0.00401 0.00401 | <0.00403 0.00403 | <0.00399 0.00399 | <0.00400 0.00400 |
| o-Xylene                                             |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| Total Xylenes                                        |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| Total BTEX                                           |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00200 0.00200 |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <b>Extracted:</b> | Oct-24-19 14:00  | Oct-24-19 14:00  | Oct-24-19 14:00  | Oct-24-19 14:00  | Oct-24-19 14:00  | Oct-24-19 14:00  |
|                                                      | <b>Analyzed:</b>  | Oct-24-19 20:01  | Oct-24-19 20:16  | Oct-24-19 20:21  | Oct-24-19 20:26  | Oct-24-19 20:31  | Oct-24-19 20:36  |
|                                                      | <b>Units/RL:</b>  | 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       | <5.01 5.01       | 8.30 5.00        | 7.72 5.00        | <4.99 4.99       |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <b>Extracted:</b> | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  |
|                                                      | <b>Analyzed:</b>  | Oct-24-19 13:13  | Oct-24-19 14:16  | Oct-24-19 14:37  | Oct-24-19 14:58  | Oct-24-19 15:32  | Oct-24-19 15:53  |
|                                                      | <b>Units/RL:</b>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)                    |                   | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Diesel Range Organics (DRO)                          |                   | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Total GRO-DRO                                        |                   | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Total TPH                                            |                   | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant

## Certificate of Analysis Summary 640781



LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 2RP-4398

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>                            | <i>Lab Id:</i>    | 640781-007       | 640781-008       | 640781-009       | 640781-010       | 640781-011       | 640781-012       |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                                      | <i>Field Id:</i>  | PH02A            | PH02B            | PH02C            | PH02D            | BH01             | BH01A            |
|                                                      | <i>Depth:</i>     | 2- ft            | 3- ft            | 4- ft            | 5- ft            | 1- ft            | 2- ft            |
|                                                      | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                                      | <i>Sampled:</i>   | Oct-22-19 14:15  | Oct-22-19 14:20  | Oct-22-19 14:25  | Oct-22-19 14:30  | Oct-22-19 16:20  | Oct-22-19 16:25  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  |
|                                                      | <i>Analyzed:</i>  | Oct-27-19 16:03  | Oct-27-19 16:23  | Oct-27-19 16:43  | Oct-27-19 17:03  | Oct-27-19 18:22  | Oct-27-19 18:42  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                                              |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| Toluene                                              |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| Ethylbenzene                                         |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| m,p-Xylenes                                          |                   | <0.00397 0.00397 | <0.00398 0.00398 | <0.00404 0.00404 | <0.00399 0.00399 | <0.00398 0.00398 | <0.00398 0.00398 |
| o-Xylene                                             |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| Total Xylenes                                        |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| Total BTEX                                           |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00202 0.00202 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <i>Extracted:</i> | Oct-24-19 14:00  | Oct-24-19 14:00  | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 20:41  | Oct-24-19 20:46  | Oct-24-19 21:16  | Oct-24-19 21:31  | Oct-24-19 21:36  | Oct-24-19 21:41  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                                             |                   | 5.08 4.96        | <5.04 5.04       | 23.4 5.00        | 29.4 5.03        | <5.05 5.05       | <5.00 5.00       |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 16:14  | Oct-24-19 16:35  | Oct-24-19 16:56  | Oct-24-19 17:16  | Oct-24-19 17:58  | Oct-24-19 18:19  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)                    |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |
| Diesel Range Organics (DRO)                          |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |
| Total GRO-DRO                                        |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |
| Total TPH                                            |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant



## Certificate of Analysis Summary 640781



LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 2RP-4398

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>                            | <i>Lab Id:</i>    | 640781-013       | 640781-014       | 640781-015       | 640781-016       | 640781-017       | 640781-018       |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                                      | <i>Field Id:</i>  | BH01B            | BH01C            | BH01D            | FS01             | FS02             | SW03             |
|                                                      | <i>Depth:</i>     | 3- ft            | 4- ft            | 5- ft            | 5- ft            | 5- ft            | 1-5 ft           |
|                                                      | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                                      | <i>Sampled:</i>   | Oct-22-19 16:30  | Oct-22-19 16:35  | Oct-22-19 16:40  | Oct-22-19 12:40  | Oct-22-19 12:45  | Oct-22-19 12:50  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 10:30  |
|                                                      | <i>Analyzed:</i>  | Oct-27-19 19:02  | Oct-27-19 19:22  | Oct-27-19 19:42  | Oct-27-19 20:02  | Oct-27-19 20:23  | Oct-27-19 20:43  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                                              |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| Toluene                                              |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| Ethylbenzene                                         |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| m,p-Xylenes                                          |                   | <0.00403 0.00403 | <0.00398 0.00398 | <0.00402 0.00402 | <0.00396 0.00396 | <0.00400 0.00400 | <0.00398 0.00398 |
| o-Xylene                                             |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| Total Xylenes                                        |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| Total BTEX                                           |                   | <0.00202 0.00202 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <i>Extracted:</i> | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 21:46  | Oct-24-19 22:01  | Oct-24-19 22:06  | Oct-24-19 22:11  | Oct-24-19 22:16  | Oct-24-19 22:21  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                                             |                   | 62.3 4.99        | 40.3 5.02        | 18.1 4.97        | 96.6 4.95        | 1000 4.95        | 1030 4.95        |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 18:41  | Oct-24-19 19:02  | Oct-24-19 19:22  | Oct-24-19 19:43  | Oct-24-19 20:04  | Oct-24-19 20:25  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)                    |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Diesel Range Organics (DRO)                          |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Total GRO-DRO                                        |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Total TPH                                            |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 640781

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Project Id: 2RP-4398

Contact: Dan Moir

Project Location:

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>                            | <i>Lab Id:</i>    | 640781-019       | 640781-020       | 640781-021       |  |  |  |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|--|--|--|
|                                                      | <i>Field Id:</i>  | SW01             | SW02             | SW04             |  |  |  |
|                                                      | <i>Depth:</i>     | 1-5 ft           | 1-5 ft           | 1-5 ft           |  |  |  |
|                                                      | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             |  |  |  |
|                                                      | <i>Sampled:</i>   | Oct-22-19 12:55  | Oct-22-19 13:00  | Oct-22-19 13:05  |  |  |  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-27-19 10:30  | Oct-27-19 10:30  | Oct-27-19 11:00  |  |  |  |
|                                                      | <i>Analyzed:</i>  | Oct-27-19 21:03  | Oct-27-19 21:23  | Oct-28-19 00:41  |  |  |  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Benzene                                              |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| Toluene                                              |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| Ethylbenzene                                         |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| m,p-Xylenes                                          |                   | <0.00400 0.00400 | <0.00402 0.00402 | <0.00398 0.00398 |  |  |  |
| o-Xylene                                             |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| Total Xylenes                                        |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| Total BTEX                                           |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00199 0.00199 |  |  |  |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <i>Extracted:</i> | Oct-24-19 14:30  | Oct-24-19 14:30  | Oct-24-19 14:30  |  |  |  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 22:41  | Oct-24-19 22:26  | Oct-24-19 22:46  |  |  |  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Chloride                                             |                   | 4430 25.2        | 633 4.99         | 572 4.98         |  |  |  |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Oct-24-19 11:00  | Oct-24-19 11:00  | Oct-24-19 11:00  |  |  |  |
|                                                      | <i>Analyzed:</i>  | Oct-24-19 20:46  | Oct-24-19 21:07  | Oct-24-19 20:46  |  |  |  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Gasoline Range Hydrocarbons (GRO)                    |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |  |  |  |
| Diesel Range Organics (DRO)                          |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |  |  |  |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |  |  |  |
| Total GRO-DRO                                        |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |  |  |  |
| Total TPH                                            |                   | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |  |  |  |

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH01**  
Lab Sample Id: 640781-001

Matrix: Soil  
Date Collected: 10.22.19 13.35

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.97  | 4.97 | mg/kg | 10.24.19 20.01 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 13.13 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 13.13 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 13.13 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 13.13 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 13.13 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 10.24.19 13.13 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 10.24.19 13.13 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01**  
Lab Sample Id: 640781-001

Matrix: Soil  
Date Collected: 10.22.19 13.35

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 10.27.19 14.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 10.27.19 14.02       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 10.27.19 14.02       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH01A**  
Lab Sample Id: 640781-002

Matrix: Soil  
Date Collected: 10.22.19 13.40

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.97  | 4.97 | mg/kg | 10.24.19 20.16 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 14.16 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 14.16 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 14.16 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 14.16 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 14.16 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 10.24.19 14.16 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 10.24.19 14.16 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01A**  
Lab Sample Id: 640781-002

Matrix: Soil  
Date Collected: 10.22.19 13.40

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 14.23       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 10.27.19 14.23       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 10.27.19 14.23       |             |     |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01B**  
Lab Sample Id: 640781-003

Matrix: Soil  
Date Collected: 10.22.19 13.45

Date Received: 10.23.19 09.12  
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.01  | 5.01 | mg/kg | 10.24.19 20.21 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 14.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 14.37 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 14.37 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 14.37 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 14.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 10.24.19 14.37 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 10.24.19 14.37 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01B**  
Lab Sample Id: 640781-003

Matrix: Soil  
Date Collected: 10.22.19 13.45

Date Received: 10.23.19 09.12  
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 14.43       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 102               | %            | 70-130        | 10.27.19 14.43       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 14.43       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH01C**  
Lab Sample Id: 640781-004

Matrix: Soil  
Date Collected: 10.22.19 13.50

Date Received: 10.23.19 09.12  
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 8.30   | 5.00 | mg/kg | 10.24.19 20.26 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 14.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 14.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 14.58 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 14.58 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 14.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 14.58 |      |
| o-Terphenyl    | 84-15-1    | 104        | %     | 70-135 | 10.24.19 14.58 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01C**  
Lab Sample Id: 640781-004

Matrix: Soil  
Date Collected: 10.22.19 13.50

Date Received: 10.23.19 09.12  
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 10.27.19 15.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 112               | %            | 70-130        | 10.27.19 15.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 97                | %            | 70-130        | 10.27.19 15.03       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH01D**  
Lab Sample Id: 640781-005

Matrix: Soil  
Date Collected: 10.22.19 13.55

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 7.72   | 5.00 | mg/kg | 10.24.19 20.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 15.32 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 15.32 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 15.32 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 15.32 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 15.32 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 10.24.19 15.32 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 10.24.19 15.32 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH01D**  
Lab Sample Id: 640781-005

Matrix: Soil  
Date Collected: 10.22.19 13.55

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.23       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 15.23       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 10.27.19 15.23       |             |     |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH02**  
Lab Sample Id: 640781-006

Matrix: Soil  
Date Collected: 10.22.19 14.10

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.99  | 4.99 | mg/kg | 10.24.19 20.36 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 15.53 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 15.53 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 15.53 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 15.53 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 15.53 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 10.24.19 15.53 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 10.24.19 15.53 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH02**  
Lab Sample Id: 640781-006

Matrix: Soil  
Date Collected: 10.22.19 14.10

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 15.43       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 10.27.19 15.43       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 10.27.19 15.43       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH02A**  
Lab Sample Id: 640781-007

Matrix: Soil  
Date Collected: 10.22.19 14.15

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 5.08   | 4.96 | mg/kg | 10.24.19 20.41 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 16.14 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 16.14 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 16.14 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 16.14 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 16.14 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 10.24.19 16.14 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 10.24.19 16.14 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH02A**  
Lab Sample Id: 640781-007

Matrix: Soil  
Date Collected: 10.22.19 14.15

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 10.27.19 16.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 10.27.19 16.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 16.03       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH02B**  
 Lab Sample Id: 640781-008

Matrix: Soil  
 Date Collected: 10.22.19 14.20

Date Received: 10.23.19 09.12  
 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105376

Date Prep: 10.24.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.04  | 5.04 | mg/kg | 10.24.19 20.46 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 16.35 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 16.35 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 16.35 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 16.35 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 16.35 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 10.24.19 16.35 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 10.24.19 16.35 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH02B**  
Lab Sample Id: 640781-008

Matrix: Soil  
Date Collected: 10.22.19 14.20

Date Received: 10.23.19 09.12  
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 16.23       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 10.27.19 16.23       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 100               | %            | 70-130        | 10.27.19 16.23       |             |     |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH02C**  
 Lab Sample Id: 640781-009

Matrix: Soil  
 Date Collected: 10.22.19 14.25

Date Received: 10.23.19 09.12  
 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 23.4   | 5.00 | mg/kg | 10.24.19 21.16 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 16.56 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 16.56 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 16.56 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 16.56 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 16.56 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 10.24.19 16.56 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 10.24.19 16.56 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH02C**  
Lab Sample Id: 640781-009

Matrix: Soil  
Date Collected: 10.22.19 14.25

Date Received: 10.23.19 09.12  
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 10.27.19 16.43       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 10.27.19 16.43       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 10.27.19 16.43       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **PH02D** Matrix: Soil Date Received: 10.23.19 09.12  
 Lab Sample Id: 640781-010 Date Collected: 10.22.19 14.30 Sample Depth: 5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight  
 Seq Number: 3105377 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 29.4   | 5.03 | mg/kg | 10.24.19 21.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight  
 Seq Number: 3105463 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 10.24.19 17.16 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 10.24.19 17.16 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 10.24.19 17.16 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 10.24.19 17.16 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 10.24.19 17.16 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 10.24.19 17.16 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 10.24.19 17.16 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **PH02D**  
Lab Sample Id: 640781-010

Matrix: Soil  
Date Collected: 10.22.19 14.30

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 17.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 10.27.19 17.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 10.27.19 17.03       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **BH01**  
Lab Sample Id: 640781-011

Matrix: Soil  
Date Collected: 10.22.19 16.20

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.05  | 5.05 | mg/kg | 10.24.19 21.36 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 17.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 17.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 17.58 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 17.58 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 17.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 100        | %     | 70-135 | 10.24.19 17.58 |      |
| o-Terphenyl    | 84-15-1    | 104        | %     | 70-135 | 10.24.19 17.58 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01**  
Lab Sample Id: 640781-011

Matrix: Soil  
Date Collected: 10.22.19 16.20

Date Received: 10.23.19 09.12  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.22       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 10.27.19 18.22       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 97                | %            | 70-130        | 10.27.19 18.22       |             |     |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **BH01A**  
Lab Sample Id: 640781-012

Matrix: Soil  
Date Collected: 10.22.19 16.25

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <5.00  | 5.00 | mg/kg | 10.24.19 21.41 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 18.19 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 18.19 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 18.19 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 18.19 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 18.19 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 10.24.19 18.19 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 10.24.19 18.19 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01A**  
Lab Sample Id: 640781-012

Matrix: Soil  
Date Collected: 10.22.19 16.25

Date Received: 10.23.19 09.12  
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 18.42       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 10.27.19 18.42       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 10.27.19 18.42       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01B**  
Lab Sample Id: 640781-013

Matrix: Soil  
Date Collected: 10.22.19 16.30

Date Received: 10.23.19 09.12  
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 62.3   | 4.99 | mg/kg | 10.24.19 21.46 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 18.41 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 18.41 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 18.41 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 18.41 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 18.41 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 18.41 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 10.24.19 18.41 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01B**  
Lab Sample Id: 640781-013

Matrix: Soil  
Date Collected: 10.22.19 16.30

Date Received: 10.23.19 09.12  
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 10.27.19 19.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 19.02       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 10.27.19 19.02       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **BH01C**  
Lab Sample Id: 640781-014

Matrix: Soil  
Date Collected: 10.22.19 16.35

Date Received: 10.23.19 09.12  
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 40.3   | 5.02 | mg/kg | 10.24.19 22.01 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 19.02 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 19.02 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 19.02 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 19.02 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 19.02 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 19.02 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 10.24.19 19.02 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01C**  
Lab Sample Id: 640781-014

Matrix: Soil  
Date Collected: 10.22.19 16.35

Date Received: 10.23.19 09.12  
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 19.22       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 19.22       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 107               | %            | 70-130        | 10.27.19 19.22       |             |     |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **BH01D**  
Lab Sample Id: 640781-015

Matrix: Soil  
Date Collected: 10.22.19 16.40

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 18.1   | 4.97 | mg/kg | 10.24.19 22.06 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 19.22 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 19.22 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 19.22 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 19.22 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 19.22 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 19.22 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 10.24.19 19.22 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01D**  
Lab Sample Id: 640781-015

Matrix: Soil  
Date Collected: 10.22.19 16.40

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 10.27.19 19.42       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 10.27.19 19.42       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 108               | %            | 70-130        | 10.27.19 19.42       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **FS01**  
Lab Sample Id: 640781-016

Matrix: Soil  
Date Collected: 10.22.19 12.40

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 96.6   | 4.95 | mg/kg | 10.24.19 22.11 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 10.24.19 19.43 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 10.24.19 19.43 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 10.24.19 19.43 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 10.24.19 19.43 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 10.24.19 19.43 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 102        | %     | 70-135 | 10.24.19 19.43 |      |
| o-Terphenyl    | 84-15-1    | 107        | %     | 70-135 | 10.24.19 19.43 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **FS01**  
Lab Sample Id: 640781-016

Matrix: Soil  
Date Collected: 10.22.19 12.40

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00396          | 0.00396      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 10.27.19 20.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 108               | %            | 70-130        | 10.27.19 20.02       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 20.02       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **FS02**  
Lab Sample Id: 640781-017

Matrix: Soil  
Date Collected: 10.22.19 12.45

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1000   | 4.95 | mg/kg | 10.24.19 22.16 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 20.04 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 20.04 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 20.04 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 20.04 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 20.04 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 20.04 |      |
| o-Terphenyl    | 84-15-1    | 104        | %     | 70-135 | 10.24.19 20.04 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **FS02**  
Lab Sample Id: 640781-017

Matrix: Soil  
Date Collected: 10.22.19 12.45

Date Received: 10.23.19 09.12  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 20.23       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 20.23       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 10.27.19 20.23       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SW03** Matrix: Soil Date Received: 10.23.19 09.12  
 Lab Sample Id: 640781-018 Date Collected: 10.22.19 12.50 Sample Depth: 1 - 5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight  
 Seq Number: 3105377 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1030   | 4.95 | mg/kg | 10.24.19 22.21 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight  
 Seq Number: 3105463 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 20.25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 20.25 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 20.25 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 20.25 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 20.25 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 10.24.19 20.25 |      |
| o-Terphenyl    | 84-15-1    | 104        | %     | 70-135 | 10.24.19 20.25 |      |





# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SW03**  
Lab Sample Id: 640781-018

Matrix: Soil  
Date Collected: 10.22.19 12.50

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.27.19 20.43       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 10.27.19 20.43       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 10.27.19 20.43       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SW01**  
Lab Sample Id: 640781-019

Matrix: Soil  
Date Collected: 10.22.19 12.55

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 4430   | 25.2 | mg/kg | 10.24.19 22.41 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 101        | %     | 70-135 | 10.24.19 20.46 |      |
| o-Terphenyl    | 84-15-1    | 105        | %     | 70-135 | 10.24.19 20.46 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SW01**  
Lab Sample Id: 640781-019

Matrix: Soil  
Date Collected: 10.22.19 12.55

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 10.27.19 10.30

Basis: Wet Weight

Seq Number: 3105530

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 10.27.19 21.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 103               | %            | 70-130        | 10.27.19 21.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 21.03       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SW02**  
Lab Sample Id: 640781-020

Matrix: Soil  
Date Collected: 10.22.19 13.00

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3105377

Date Prep: 10.24.19 14.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 633    | 4.99 | mg/kg | 10.24.19 22.26 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 10.24.19 21.07 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 10.24.19 21.07 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 10.24.19 21.07 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 10.24.19 21.07 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 10.24.19 21.07 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 100        | %     | 70-135 | 10.24.19 21.07 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 10.24.19 21.07 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SW02**  
Lab Sample Id: 640781-020

Matrix: Soil  
Date Collected: 10.22.19 13.00

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105530

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 10.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 10.27.19 21.23       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.27.19 21.23       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 10.27.19 21.23       |             |     |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

### PLU Big Sinks 25 Federal Battery

Sample Id: **SW04** Matrix: Soil Date Received: 10.23.19 09.12  
 Lab Sample Id: 640781-021 Date Collected: 10.22.19 13.05 Sample Depth: 1 - 5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight  
 Seq Number: 3105377 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 572    | 4.98 | mg/kg | 10.24.19 22.46 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight  
 Seq Number: 3105466 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 10.24.19 20.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 81         | %     | 70-135 | 10.24.19 20.46 |      |
| o-Terphenyl    | 84-15-1    | 82         | %     | 70-135 | 10.24.19 20.46 |      |



# Certificate of Analytical Results 640781

## LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **SW04**  
Lab Sample Id: 640781-021

Matrix: Soil  
Date Collected: 10.22.19 13.05

Date Received: 10.23.19 09.12  
Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3105532

Prep Method: SW5030B

% Moisture:

Date Prep: 10.27.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 10.28.19 00.41       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 99                | %            | 70-130        | 10.28.19 00.41       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 102               | %            | 70-130        | 10.28.19 00.41       |             |     |





## 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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105376

MB Sample Id: 7688862-1-BLK

Matrix: Solid

LCS Sample Id: 7688862-1-BKS

Prep Method: E300P

Date Prep: 10.24.19

LCSD Sample Id: 7688862-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00     | 250          | 263        | 105      | 258         | 103       | 90-110 | 2    | 20        | mg/kg | 10.24.19 18:22 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105377

MB Sample Id: 7688863-1-BLK

Matrix: Solid

LCS Sample Id: 7688863-1-BKS

Prep Method: E300P

Date Prep: 10.24.19

LCSD Sample Id: 7688863-1-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          | 265        | 106      | 264         | 106       | 90-110 | 0    | 20        | mg/kg | 10.24.19 21:06 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105376

Parent Sample Id: 640895-022

Matrix: Soil

MS Sample Id: 640895-022 S

Prep Method: E300P

Date Prep: 10.24.19

MSD Sample Id: 640895-022 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 32.6          | 249          | 299       | 107     | 296        | 106      | 90-110 | 1    | 20        | mg/kg | 10.24.19 18:37 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105376

Parent Sample Id: 640896-004

Matrix: Soil

MS Sample Id: 640896-004 S

Prep Method: E300P

Date Prep: 10.24.19

MSD Sample Id: 640896-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 27.9          | 253          | 303       | 109     | 290        | 104      | 90-110 | 4    | 20        | mg/kg | 10.24.19 19:47 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105377

Parent Sample Id: 640781-009

Matrix: Soil

MS Sample Id: 640781-009 S

Prep Method: E300P

Date Prep: 10.24.19

MSD Sample Id: 640781-009 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 23.4          | 250          | 303       | 112     | 305        | 113      | 90-110 | 1    | 20        | mg/kg | 10.24.19 21:21 | 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



**LT Environmental, Inc.**  
**PLU Big Sinks 25 Federal Battery**

**Analytical Method: Chloride by EPA 300**

Seq Number: 3105377

Parent Sample Id: 640781-020

Matrix: Soil

MS Sample Id: 640781-020 S

Prep Method: E300P

Date Prep: 10.24.19

MSD Sample Id: 640781-020 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 633           | 250          | 922       | 116     | 930        | 119      | 90-110 | 1    | 20        | mg/kg | 10.24.19 22:31 | X    |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105463

MB Sample Id: 7688840-1-BLK

Matrix: Solid

LCS Sample Id: 7688840-1-BKS

Prep Method: SW8015P

Date Prep: 10.24.19

LCSD Sample Id: 7688840-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0     | 1000         | 1140       | 114      | 1140        | 114       | 70-135 | 0    | 20        | mg/kg | 10.24.19 12:32 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 1110       | 111      | 1120        | 112       | 70-135 | 1    | 20        | mg/kg | 10.24.19 12:32 |      |

**Surrogate**

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 104     |         | 116      |          | 117       |           | 70-135 | %     | 10.24.19 12:32 |
| o-Terphenyl    | 103     |         | 117      |          | 117       |           | 70-135 | %     | 10.24.19 12:32 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105466

MB Sample Id: 7688841-1-BLK

Matrix: Solid

LCS Sample Id: 7688841-1-BKS

Prep Method: SW8015P

Date Prep: 10.24.19

LCSD Sample Id: 7688841-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 983        | 98       | 981         | 98        | 70-135 | 0    | 20        | mg/kg | 10.24.19 12:32 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 927        | 93       | 1040        | 104       | 70-135 | 11   | 20        | mg/kg | 10.24.19 12:32 |      |

**Surrogate**

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 94      |         | 101      |          | 102       |           | 70-135 | %     | 10.24.19 12:32 |
| o-Terphenyl    | 99      |         | 101      |          | 100       |           | 70-135 | %     | 10.24.19 12:32 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105463

Matrix: Solid

MB Sample Id: 7688840-1-BLK

Prep Method: SW8015P

Date Prep: 10.24.19

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 10.24.19 12:11 |      |

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



**LT Environmental, Inc.**  
**PLU Big Sinks 25 Federal Battery**

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105466

Matrix: Solid

Prep Method: SW8015P

Date Prep: 10.24.19

MB Sample Id: 7688841-1-BLK

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 10.24.19 12:11 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105463

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.24.19

Parent Sample Id: 640781-001

MS Sample Id: 640781-001 S

MSD Sample Id: 640781-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 999          | 1100      | 110     | 1150       | 115      | 70-135 | 4    | 20        | mg/kg | 10.24.19 13:34 |      |
| Diesel Range Organics (DRO)       | <15.0         | 999          | 1120      | 112     | 1170       | 117      | 70-135 | 4    | 20        | mg/kg | 10.24.19 13:34 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 105     |         | 109      |          | 70-135 | %     | 10.24.19 13:34 |
| o-Terphenyl    | 102     |         | 105      |          | 70-135 | %     | 10.24.19 13:34 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3105466

Matrix: Soil

Prep Method: SW8015P

Date Prep: 10.24.19

Parent Sample Id: 640827-001

MS Sample Id: 640827-001 S

MSD Sample Id: 640827-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0         | 997          | 975       | 98      | 965        | 97       | 70-135 | 1    | 20        | mg/kg | 10.24.19 13:34 |      |
| Diesel Range Organics (DRO)       | 22.3          | 997          | 924       | 90      | 899        | 88       | 70-135 | 3    | 20        | mg/kg | 10.24.19 13:34 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 91      |         | 89       |          | 70-135 | %     | 10.24.19 13:34 |
| o-Terphenyl    | 86      |         | 84       |          | 70-135 | %     | 10.24.19 13:34 |

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

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

Seq Number: 3105530

MB Sample Id: 7688948-1-BLK

Matrix: Solid

LCS Sample Id: 7688948-1-BKS

Prep Method: SW5030B

Date Prep: 10.27.19

LCSD Sample Id: 7688948-1-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        | 0.112      | 112      | 0.120       | 120       | 70-130 | 7    | 35        | mg/kg | 10.27.19 12:03 |      |
| Toluene      | <0.00200  | 0.100        | 0.110      | 110      | 0.111       | 111       | 70-130 | 1    | 35        | mg/kg | 10.27.19 12:03 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.115      | 115      | 0.112       | 112       | 70-130 | 3    | 35        | mg/kg | 10.27.19 12:03 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.234      | 117      | 0.226       | 113       | 70-130 | 3    | 35        | mg/kg | 10.27.19 12:03 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.114      | 114      | 0.111       | 111       | 70-130 | 3    | 35        | mg/kg | 10.27.19 12:03 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 96      |         | 97       |          | 99        |           | 70-130 | %     | 10.27.19 12:03 |
| 4-Bromofluorobenzene | 99      |         | 109      |          | 98        |           | 70-130 | %     | 10.27.19 12:03 |

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

Seq Number: 3105532

MB Sample Id: 7688950-1-BLK

Matrix: Solid

LCS Sample Id: 7688950-1-BKS

Prep Method: SW5030B

Date Prep: 10.27.19

LCSD Sample Id: 7688950-1-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        | 0.108      | 108      | 0.108       | 108       | 70-130 | 0    | 35        | mg/kg | 10.27.19 22:41 |      |
| Toluene      | <0.00200  | 0.100        | 0.102      | 102      | 0.100       | 100       | 70-130 | 2    | 35        | mg/kg | 10.27.19 22:41 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.103      | 103      | 0.0998      | 100       | 70-130 | 3    | 35        | mg/kg | 10.27.19 22:41 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.207      | 104      | 0.200       | 100       | 70-130 | 3    | 35        | mg/kg | 10.27.19 22:41 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.103      | 103      | 0.100       | 100       | 70-130 | 3    | 35        | mg/kg | 10.27.19 22:41 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 94      |         | 97       |          | 98        |           | 70-130 | %     | 10.27.19 22:41 |
| 4-Bromofluorobenzene | 95      |         | 104      |          | 98        |           | 70-130 | %     | 10.27.19 22:41 |

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

Seq Number: 3105530

Parent Sample Id: 640781-001

Matrix: Soil

MS Sample Id: 640781-001 S

Prep Method: SW5030B

Date Prep: 10.27.19

MSD Sample Id: 640781-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00201      | 0.101        | 0.108     | 107     | 0.124      | 124      | 70-130 | 14   | 35        | mg/kg | 10.27.19 12:43 |      |
| Toluene      | <0.00201      | 0.101        | 0.0996    | 99      | 0.113      | 113      | 70-130 | 13   | 35        | mg/kg | 10.27.19 12:43 |      |
| Ethylbenzene | <0.00201      | 0.101        | 0.0994    | 98      | 0.112      | 112      | 70-130 | 12   | 35        | mg/kg | 10.27.19 12:43 |      |
| m,p-Xylenes  | <0.00402      | 0.201        | 0.201     | 100     | 0.226      | 113      | 70-130 | 12   | 35        | mg/kg | 10.27.19 12:43 |      |
| o-Xylene     | <0.00201      | 0.101        | 0.0994    | 98      | 0.111      | 111      | 70-130 | 11   | 35        | mg/kg | 10.27.19 12:43 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 102     |         | 102      |          | 70-130 | %     | 10.27.19 12:43 |
| 4-Bromofluorobenzene | 101     |         | 107      |          | 70-130 | %     | 10.27.19 12:43 |

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



**LT Environmental, Inc.**  
PLU Big Sinks 25 Federal Battery

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

Seq Number: 3105532

Parent Sample Id: 640781-021

Matrix: Soil

MS Sample Id: 640781-021 S

Prep Method: SW5030B

Date Prep: 10.27.19

MSD Sample Id: 640781-021 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        | 0.0940    | 94      | 0.0880     | 87       | 70-130 | 7    | 35        | mg/kg | 10.27.19 23:22 |      |
| Toluene      | <0.00200      | 0.100        | 0.0852    | 85      | 0.0782     | 77       | 70-130 | 9    | 35        | mg/kg | 10.27.19 23:22 |      |
| Ethylbenzene | <0.00200      | 0.100        | 0.0871    | 87      | 0.0778     | 77       | 70-130 | 11   | 35        | mg/kg | 10.27.19 23:22 |      |
| m,p-Xylenes  | <0.00401      | 0.200        | 0.174     | 87      | 0.154      | 76       | 70-130 | 12   | 35        | mg/kg | 10.27.19 23:22 |      |
| o-Xylene     | <0.00200      | 0.100        | 0.0910    | 91      | 0.0804     | 80       | 70-130 | 12   | 35        | mg/kg | 10.27.19 23:22 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 100     |         | 101      |          | 70-130 | %     | 10.27.19 23:22 |
| 4-Bromofluorobenzene | 110     |         | 98       |          | 70-130 | %     | 10.27.19 23:22 |

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

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

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

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





## Chain of Custody

Work Order No: 1640781

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 Crashtad, NM (432) 704-5440  
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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|                  |                      |                         |                             |
|------------------|----------------------|-------------------------|-----------------------------|
| Project Manager: | Don Mc...            | Bill to: (if different) | Atokale Little              |
| Company Name:    | LT Environmental     | Company Name:           | XTO                         |
| Address:         | 3300 North A Stal    | Address:                | 3104 E Green Street         |
| City, State ZIP: | Milled, Texas, 79705 | City, State ZIP:        | Carlsbad, NM, 88220         |
| Phone:           | 432. 236. 3849       | Email:                  | sl@hval.com daniel@hval.com |

|                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>      |
| State of Project:                                                                                                                                                                |
| Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/> |
| Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                                 |

|                   |                              |             |                                     |
|-------------------|------------------------------|-------------|-------------------------------------|
| Project Name:     | PLU Big Saks 25 Edm1 Battery | Turn Around | <input checked="" type="checkbox"/> |
| Project Number:   | 2LP-4398                     | Routine:    | <input checked="" type="checkbox"/> |
| Project Location: |                              | Rush:       |                                     |
| Sampler's Name:   |                              | Due Date:   |                                     |
| PO #:             |                              | Quote #:    |                                     |

|                       |                                                                         |                    |                                                                     |          |                                                                     |
|-----------------------|-------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------|----------|---------------------------------------------------------------------|
| SAMPLE RECEIPT        |                                                                         | Temp Blank:        | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Wet Ice: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Temperature (°C):     | 4.0                                                                     | Thermometer ID     | TMM007                                                              |          |                                                                     |
| Received Intact:      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>     | Correction Factor: | -0.2                                                                |          |                                                                     |
| Cooler Custody Seals: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Total Containers:  | 21                                                                  |          |                                                                     |

| Lab ID | Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | Analysis Request    | Preservative Codes   | Sample Comments |
|--------|-----------------------|--------|--------------|--------------|-------|----------------------|---------------------|----------------------|-----------------|
|        | PH01                  | 5      | 10.22.19     | 1335         | 1'    | 1                    | TPH (EPA 8015)      | MeOH: Me             |                 |
|        | PH01A                 |        |              | 1340         | 2'    | X                    | Chlorides (EPA 300) | None: NO             |                 |
|        | PH01B                 |        |              | 1345         | 3'    | X                    | BTEX (EPA 8021)     | HNO3: HN             |                 |
|        | PH01C                 |        |              | 1350         | 4'    | X                    |                     | H2SO4: H2            |                 |
|        | PH01D                 |        |              | 1355         | 5'    | X                    |                     | HCL: HL              |                 |
|        | PH02                  |        |              | 1410         | 1'    | X                    |                     | NaOH: Na             |                 |
|        | PH02A                 |        |              | 1415         | 2'    | X                    |                     | Zn Acetate+ NaOH: Zn |                 |
|        | PH02B                 |        |              | 1420         | 3'    | X                    |                     |                      |                 |
|        | PH02C                 |        |              | 1425         | 4'    | X                    |                     |                      |                 |
|        | PH02D                 |        |              | 1430         | 5'    | X                    |                     |                      |                 |

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Pb Mn Mo Ni K Se Ag SiO2 Na Sr Ti 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 Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

|                              |                          |                |                              |                          |           |
|------------------------------|--------------------------|----------------|------------------------------|--------------------------|-----------|
| Relinquished by: (Signature) | Received by: (Signature) | Date/Time      | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|                              |                          | 10/23/19 09:12 |                              |                          |           |
|                              |                          | 4              |                              |                          |           |
|                              |                          | 6              |                              |                          |           |





Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Work Order No: 1940781

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6766  
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1266 Crasabad, NM (432) 704-5440

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Work Order Comments

| ANALYSIS REQUEST |  |  |  |  |  |  |  |  |  | Preservative Codes                  |
|------------------|--|--|--|--|--|--|--|--|--|-------------------------------------|
|                  |  |  |  |  |  |  |  |  |  | MeOH: Me                            |
|                  |  |  |  |  |  |  |  |  |  | None: NO                            |
|                  |  |  |  |  |  |  |  |  |  | HNO <sub>3</sub> : HN               |
|                  |  |  |  |  |  |  |  |  |  | H <sub>2</sub> SO <sub>4</sub> : H2 |

HCL: HL  
NaOH: Na  
Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab. if  
received by 4:00pm

[illegible]

| Total                                       | 200.7 / 6010 | 200.8 / 6020: |                  |
|---------------------------------------------|--------------|---------------|------------------|
| Circle Method(s) and Metals) to be analyzed | 8RCRA        | 13PPM         | Texas 11         |
|                                             | Al           | Sb            | As               |
|                                             | Ba           | Be            | B                |
|                                             | Cd           | Ca            | Cr               |
|                                             | Co           | Cu            | Fe               |
|                                             | Pb           | Mg            | Mn               |
|                                             | Mo           | Ni            | K                |
|                                             | Se           | Ag            | SiO <sub>2</sub> |
|                                             | Na           | Sr            | Ti               |
|                                             | Sn           | U             | V                |
|                                             | Zn           |               |                  |
|                                             | TCLP / SPLP  | 6010:         | 8RCRA            |
|                                             | Sb           | As            | Ba               |
|                                             | Be           | B             | Cd               |
|                                             | Ca           | Cr            | Co               |
|                                             | Cu           | Pb            | Mn               |
|                                             | Mo           | Ni            | Se               |
|                                             | Ag           | Ti            | U                |
|                                             | 1631 / 245-1 | 7470 / 7471   | Hd               |

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| Relinquished by: (Signature) | Received by: (Signature) | Date/Time      | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|------------------------------|--------------------------|----------------|------------------------------|--------------------------|-----------|
| <i>[Signature]</i>           | <i>[Signature]</i>       | 10/23/19 09:12 |                              |                          |           |
|                              |                          |                |                              |                          |           |
|                              |                          |                |                              |                          |           |
|                              |                          |                |                              |                          |           |
|                              |                          |                |                              |                          |           |





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 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

## Chain of Custody

Work Order No:

640781

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|                  |                     |                         |                                |
|------------------|---------------------|-------------------------|--------------------------------|
| Project Manager: | Don Meyer           | Bill to: (if different) | hyle, hyle                     |
| Company Name:    | LT Environmental    | Company Name:           | YTO                            |
| Address:         | 3300 North A Street | Address:                | 2100 E Green Street            |
| City, State ZIP: | Midland TX 79705    | City, State ZIP:        | Carlsbad, NM, 88210            |
| Phone:           | 432.236.3649        | Email:                  | slc@henvu.com, dmyer@henvu.com |

|                                                                                                                                                                                                                       |                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Program: <input type="checkbox"/> PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/><br>State of Project: |                                    |
| Reporting Level II <input type="checkbox"/>                                                                                                                                                                           | Level III <input type="checkbox"/> |
| PST/UST <input type="checkbox"/>                                                                                                                                                                                      | TRRP <input type="checkbox"/>      |
| Level IV <input type="checkbox"/>                                                                                                                                                                                     | Other: <input type="checkbox"/>    |
| Deliverables: EDD <input type="checkbox"/>                                                                                                                                                                            | ADAPT <input type="checkbox"/>     |

|                   |                                   |             |                                     |            |  |
|-------------------|-----------------------------------|-------------|-------------------------------------|------------|--|
| Project Name:     | PLV B19 Sales 25 pole oil Battery | Turn Around | <input checked="" type="checkbox"/> | Pres. Code |  |
| Project Number:   | 288-4398                          | Routine     | <input checked="" type="checkbox"/> |            |  |
| Project Location: |                                   | Rush:       |                                     |            |  |
| Sampler's Name:   |                                   | Due Date:   |                                     |            |  |
| PO #:             |                                   | Quote #:    |                                     |            |  |

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

| Lab ID | Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | Analysis Request     | Preservative Codes                                            | Sample Comments |
|--------|-----------------------|--------|--------------|--------------|-------|----------------------|----------------------|---------------------------------------------------------------|-----------------|
| 5004   |                       | S      | 10-1-19      | 1305         | 1-5'  | 1                    | TPH (6 PA 8015)      | MeOH: Me                                                      |                 |
|        |                       |        |              |              |       | 1                    | Chlorides (6 PA 300) | None: NO                                                      |                 |
|        |                       |        |              |              |       | 1                    | STER (6 PA 8021)     | HNO3: HN                                                      |                 |
|        |                       |        |              |              |       |                      |                      | H2SO4: H2                                                     |                 |
|        |                       |        |              |              |       |                      |                      | HCL: HL                                                       |                 |
|        |                       |        |              |              |       |                      |                      | NaOH: Na                                                      |                 |
|        |                       |        |              |              |       |                      |                      | Zn Acetate+ NaOH: Zn                                          |                 |
|        |                       |        |              |              |       |                      |                      | TAT starts the day received by the lab, if received by 4:00pm |                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                        |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|------------------------------|
| Total 200.7 / 6010 200.8 / 6020:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          | 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti 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 Ti U                                 |                              |
| Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenenco, but not analyzed. These terms will be enforced unless previously negotiated. |                          |                                                                                                        |                              |
| Relinquished by: (Signature)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Received by: (Signature) | Date/Time                                                                                              | Relinquished by: (Signature) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          | 10/23/19 09:12                                                                                         |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                        |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                        |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                        |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                        |                              |

Revised Date 02/26/19 Rev. 2019



## Inter-Office Shipment

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IOS Number **50698**

Date/Time: 10/23/19 14:02

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776797683616

E-Mail: jessica.kramer@xenco.com

| Sample Id  | Matrix | Client Sample Id | Sample Collection | Method       | Method Name         | Lab Due  | HT Due   | PM  | Analytes             | Sign |
|------------|--------|------------------|-------------------|--------------|---------------------|----------|----------|-----|----------------------|------|
| 640781-001 | S      | PH01             | 10/22/19 13:35    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-001 | S      | PH01             | 10/22/19 13:35    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-001 | S      | PH01             | 10/22/19 13:35    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-002 | S      | PH01A            | 10/22/19 13:40    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-002 | S      | PH01A            | 10/22/19 13:40    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-002 | S      | PH01A            | 10/22/19 13:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-003 | S      | PH01B            | 10/22/19 13:45    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-003 | S      | PH01B            | 10/22/19 13:45    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-003 | S      | PH01B            | 10/22/19 13:45    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-004 | S      | PH01C            | 10/22/19 13:50    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-004 | S      | PH01C            | 10/22/19 13:50    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-004 | S      | PH01C            | 10/22/19 13:50    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-005 | S      | PH01D            | 10/22/19 13:55    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-005 | S      | PH01D            | 10/22/19 13:55    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-005 | S      | PH01D            | 10/22/19 13:55    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-006 | S      | PH02             | 10/22/19 14:10    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-006 | S      | PH02             | 10/22/19 14:10    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-006 | S      | PH02             | 10/22/19 14:10    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-007 | S      | PH02A            | 10/22/19 14:15    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-007 | S      | PH02A            | 10/22/19 14:15    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-007 | S      | PH02A            | 10/22/19 14:15    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-008 | S      | PH02B            | 10/22/19 14:20    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-008 | S      | PH02B            | 10/22/19 14:20    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-008 | S      | PH02B            | 10/22/19 14:20    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-009 | S      | PH02C            | 10/22/19 14:25    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |



## Inter-Office Shipment

Page 2 of 3

IOS Number **50698**

Date/Time: 10/23/19 14:02

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776797683616

E-Mail: jessica.kramer@xenco.com

| Sample Id  | Matrix | Client Sample Id | Sample Collection | Method       | Method Name         | Lab Due  | HT Due   | PM  | Analytes             | Sign |
|------------|--------|------------------|-------------------|--------------|---------------------|----------|----------|-----|----------------------|------|
| 640781-009 | S      | PH02C            | 10/22/19 14:25    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-009 | S      | PH02C            | 10/22/19 14:25    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-010 | S      | PH02D            | 10/22/19 14:30    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-010 | S      | PH02D            | 10/22/19 14:30    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-010 | S      | PH02D            | 10/22/19 14:30    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-011 | S      | BH01             | 10/22/19 16:20    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-011 | S      | BH01             | 10/22/19 16:20    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-011 | S      | BH01             | 10/22/19 16:20    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-012 | S      | BH01A            | 10/22/19 16:25    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-012 | S      | BH01A            | 10/22/19 16:25    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-012 | S      | BH01A            | 10/22/19 16:25    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-013 | S      | BH01B            | 10/22/19 16:30    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-013 | S      | BH01B            | 10/22/19 16:30    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-013 | S      | BH01B            | 10/22/19 16:30    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-014 | S      | BH01C            | 10/22/19 16:35    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-014 | S      | BH01C            | 10/22/19 16:35    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-014 | S      | BH01C            | 10/22/19 16:35    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-015 | S      | BH01D            | 10/22/19 16:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-015 | S      | BH01D            | 10/22/19 16:40    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-015 | S      | BH01D            | 10/22/19 16:40    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-016 | S      | FS01             | 10/22/19 12:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-016 | S      | FS01             | 10/22/19 12:40    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-016 | S      | FS01             | 10/22/19 12:40    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-017 | S      | FS02             | 10/22/19 12:45    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-017 | S      | FS02             | 10/22/19 12:45    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |

Inter Office Shipment or Sample Comments:





## Inter-Office Shipment

Page 3 of 3

IOS Number **50698**

Date/Time: 10/23/19 14:02

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776797683616

E-Mail: jessica.kramer@xenco.com

| Sample Id  | Matrix | Client Sample Id | Sample Collection | Method       | Method Name         | Lab Due  | HT Due   | PM  | Analytes             | Sign |
|------------|--------|------------------|-------------------|--------------|---------------------|----------|----------|-----|----------------------|------|
| 640781-017 | S      | FS02             | 10/22/19 12:45    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-018 | S      | SW03             | 10/22/19 12:50    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-018 | S      | SW03             | 10/22/19 12:50    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-018 | S      | SW03             | 10/22/19 12:50    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-019 | S      | SW01             | 10/22/19 12:55    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-019 | S      | SW01             | 10/22/19 12:55    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-019 | S      | SW01             | 10/22/19 12:55    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-020 | S      | SW02             | 10/22/19 13:00    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |
| 640781-020 | S      | SW02             | 10/22/19 13:00    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-020 | S      | SW02             | 10/22/19 13:00    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-021 | S      | SW04             | 10/22/19 13:05    | SW8021B      | BTEX by EPA 8021B   | 10/29/19 | 11/05/19 | JKR | BR4FBZ BZ BZME EBZ X |      |
| 640781-021 | S      | SW04             | 10/22/19 13:05    | SW8015MOD_NM | TPH by SW8015 Mod   | 10/29/19 | 11/05/19 | JKR | GRO-DRO PHCC10C28 PF |      |
| 640781-021 | S      | SW04             | 10/22/19 13:05    | E300_CL      | Chloride by EPA 300 | 10/29/19 | 04/19/20 | JKR | CL                   |      |

## Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished:

10/23/2019

Received By:

Brianna Teel

Date Received:

10/24/2019 11:18

Cooler Temperature:

0.6



## XENCO Laboratories

## Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50698

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/23/2019 02:02 PM

Received By: Brianna Teel

Date Received: 10/24/2019 11:18 AM

## Sample Receipt Checklist

## Comments

|                                                           |     |
|-----------------------------------------------------------|-----|
| #1 *Temperature of cooler(s)?                             | .6  |
| #2 *Shipping container in good condition?                 | Yes |
| #3 *Samples received with appropriate temperature?        | Yes |
| #4 *Custody Seals intact on shipping container/ cooler?   | Yes |
| #5 *Custody Seals Signed and dated for Containers/coolers | Yes |
| #6 *IOS present?                                          | Yes |
| #7 Any missing/extra samples?                             | No  |
| #8 IOS agrees with sample label(s)/matrix?                | Yes |
| #9 Sample matrix/ properties agree with IOS?              | Yes |
| #10 Samples in proper container/ bottle?                  | Yes |
| #11 Samples properly preserved?                           | Yes |
| #12 Sample container(s) intact?                           | Yes |
| #13 Sufficient sample amount for indicated test(s)?       | Yes |
| #14 All samples received within hold time?                | Yes |

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

NonConformance:

Corrective Action Taken:

## Nonconformance Documentation

Contact: \_\_\_\_\_ Contacted by : \_\_\_\_\_ Date: \_\_\_\_\_

Checklist reviewed by:

Brianna Teel

Date: 10/24/2019



Client: LT Environmental, Inc.

Date/ Time Received: 10/23/2019 09:12:00 AM

Work Order #: 640781

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

  
Elizabeth McClellan

Date: 10/23/2019

Checklist reviewed by:

  
Jessica Kramer

Date: 10/24/2019



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 5012

CONDITIONS

|                                                                             |                                                           |
|-----------------------------------------------------------------------------|-----------------------------------------------------------|
| Operator:<br>XTO ENERGY, INC<br>6401 Holiday Hill Road<br>Midland, TX 79707 | OGRID:<br>5380                                            |
|                                                                             | Action Number:<br>5012                                    |
|                                                                             | Action Type:<br>[C-141] Release Corrective Action (C-141) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|-----------|----------------|
| bbillings  | None      | 10/25/2022     |